JUNE 2024 VOLUME 21 ISSUE 6

THE LOGGER'S BARK

a magazine

Radio Club of Tacoma

Cover photo
Dave W7UUU

Mike W7XTZ with Jim K7SSS (SK)
and David W7HTJ (SK) - FD 2019
Good memories of 2 good friends

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W7DK 2024 Officers and Committee Leaders

Executive Committee:

President:	Mike Mikuchonis W7XTZ
Vice President:	Adam Barbera W2NCC
Secretary:	Gary McAdams WG7X
Treasurer:	Steve Dightman AF7YD

Board of directors:

Board:	Mike Drorbaugh W7MKE
Board:	Paul Matney W7PFU
Board:	Doug Schafer AB7DG
Board:	Red Cranefield WB7EC
Board:	Phil Pia K7PIA

Key Committee Chairpersons:

Membership:	George K7GRS/Mike W7XH
Salmon Run:	George K7GRS/Mike W7XH
Infotech/IT:	Randy WB4SPB
HF Operations:	Phil K7PIA
Facilities:	Adam W2NCC
Property Mgmt.	Red WB7EC
Museum:	Dan KD7SV
Planning:	Manny AD7MA
POTA:	BJ WA7WJR
General Meeting:	Dave W7UUU
Bark layout & Editor:	Dave W7UUU
Assistant/Copy Editor:	Anne N7ANN

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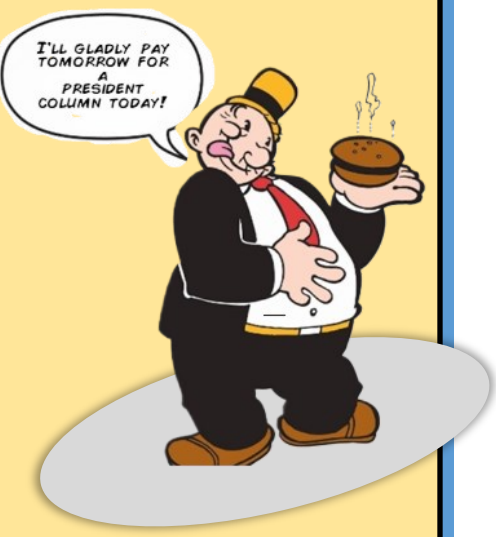
But don't stop there! Each issue is 50 or more pages of fun and cool stuff to explore! Scroll on!

Have a submission for our next issue?

loggersbark@gmail.com

OUR PRESIDENT, Mike W7XTZ, was drawn away this month on an important Presidential *Top Secret* mission abroad, in efforts to improve the Amateur Radio World for all time and for all hams everywhere, and most especially for us, the Radio Club of Tacoma! He will be back next month. ■ *-editor*



PRINT TO PLAY!

US Presidents Word Search

R	R	Z	O	V	F	M	E	J	E	F	F	E	R	S	O	N	I	E	Q	Y	K	Y	C
M	E	T	N	O	S	I	R	R	A	H	V	H	S	U	B	Q	B	L	V	A	A	D	M
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A	D	U	O	J	D	Y	S	H	B	K	B	T	A	F	T	I	H	D	S	S	V	N	J
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P	L	H	X	L	S	C	Y	C	A	A	A	E	B	V	A	N	B	U	R	E	N	Z	M
B	E	X	B	N	O	E	I	R	N	E	T	R	U	M	A	N	I	M	O	J	M	M	R
I	V	L	R	T	F	P	E	Y	A	L	T	Q	T	R	U	M	P	Z	M	W	E	J	K
D	E	N	D	T	A	L	J	V	H	H	P	W	E	O	R	N	O	M	L	J	K	N	J
E	S	C	O	R	Y	Y	L	L	C	D	G	U	P	G	O	H	P	L	L	R	N	O	H
N	O	B	L	T	E	I	L	S	U	G	A	R	F	I	E	L	D	K	I	G	H	G	L
Q	O	V	Z	I	G	A	M	O	B	O	J	D	Y	I	I	N	Z	F	F	N	N	I	M
Y	R	P	P	D	N	N	G	O	R	D	T	G	E	S	B	K	N	O	S	I	D	A	M
C	M	C	D	N	O	T	I	A	E	R	D	A	L	C	H	W	Z	O	D	L	Q	R	A
F	U	V	O	A	H	A	O	H	N	B	V	W	N	U	Q	P	N	R	N	I	K	D	F
B	L	I	S	R	H	Y	A	N	S	F	J	V	I	H	Z	P	A	O	I	N	C	I	Q
S	Y	S	X	G	E	S	X	I	Q	A	W	L	K	N	L	H	Z	J	K	C	C	W	N
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G	O	R	U	H	T	R	A	U	Y	A	B	B	M	C	F	P	K	D	V	L	B	L	E
Q	R	H	A	S	E	Y	A	H	R	E	W	O	H	N	E	S	I	E	U	N	H	S	Q
J	F	A	C	K	S	O	N	Q	V	L	H	T	Z	C	A	R	T	E	R	J	Y	O	J
L	F	V	Q	C	L	E	V	E	L	A	N	D	T	Q	A	M	A	B	O	H	K	N	G

JACKSON	VAN BUREN	WILSON	WASHINGTON	TYLER
TRUMP	TRUMAN	TAYLOR	TAFT	ROOSEVELT
REAGAN	POLK	PIERCE	OBAMA	NIXON
MONROE	MCKINLEY	MADISON	LINCOLN	KENNEDY
JOHNSON	JEFFERSON	HOOVER	HAYES	HARRISON
HARDING	GRAND	GARFIELD	FORD	FILLMORE
EISENHOWER	COOLIDGE	CLINTON	CLEVELAND	CARTER
BUSH	BUCHANAN	BIDEN	ARTHUR	ADAMS

FROM THE DESK OF THE VP

Adam Barbera
W2NCC

Insights from our Vice President

ENCOURAGING NEW HAM RADIO OPERATORS to *Get On the Air* as we bid farewell to the Solar Minimum, we welcome a period of heightened solar activity. This shift brings with it a promise of more frequent openings of the high frequency (HF) bands, paving the way for improved long-distance communication.

For ham radio operators, this means an opportunity to connect with people across the globe. The impact of this change is particularly noticeable for Sideband operators. During the solar minimum, CW and digital modes were the lifelines that kept us connected worldwide.

Now, with the solar minimum in our rearview mirror, the sideband modes are becoming increasingly accessible. For newcomers to ham radio, there has never been a more exciting time to get on the air. It's not uncommon for 20-meter SSB to remain open until late into the night, often until 10 or 11 pm. The thrill of tuning across the band, listening for a DX station, and successfully making contact with an unfamiliar station's operator is a unique experience that only ham radio can offer.

Each new contact made over the airwaves brings with it a sense of adventure and achievement. Whether it's stumbling upon a rare DX station or just connecting with a local ham, every contact adds an element of surprise and excitement to the hobby.

I strongly encourage new hams to seize this opportunity. Find an open frequency, call CQ, and see who responds! This isn't a contest; there's no rush. It's about making contact with a complete stranger and then taking a few minutes to get to know this person.

The joy of ham radio lies not just in talking on the radio, but in the entire journey that leads up to it. From setting up equipment and exploring wave propagation, to developing good radio communication skills, every aspect of ham radio offers an opportunity for growth and discovery.

Each contact made represents a shared experience that enriches the lives of operators worldwide. In conclusion, the rise in solar activity marks the dawn of a new solar maximum for ham radio operators. As the world becomes more interconnected, ham radio continues to provide a unique platform for people to connect and learn from each other. So, to all new hams out there, now is the perfect time to get on the air and start making those contacts. The world is waiting to hear from *you.*

VP Adam W2NCC

Photo: © Jeff Geerling KF0MYB

SECRETARY'S REPORT

W7DK Secretary—Gary WG7X

THIS MONTH'S SUBJECT: **Picnics!**

Folks, we have two picnics coming up: first, what we laughingly call a "picnic with radios" AKA Field Day. As we usually do this time of year, W7DK is preparing for field day at our usual site at Western State Hospital in Lakewood. It is going to be a bit different this year in that we are downsizing a bit from 5A to 4A. Not much of a change, but the Field Day Marshal Mike Drorbaugh decided, with the help of the Board of Directors and other interested parties, to make every station be "all mode" this time, which simply means that there will not be any stations dedicated to CW this year.

Station operation will be at the discretion of each individual station manager. All the managers will be listed in the club newsletter, which if you are reading this, you already know. But still, field day is a traditional pursuit for a lot of ham radio clubs and W7DK is no exception.

If you are interested in doing Field Day at any one station, just get with that manager. Speaking for myself, I will be doing the 10-meter station, and anyone is welcome to come by and operate. Hopefully, there will be some activity (and no solar flares)!

The stations are as follows: 10-meter station managed by Gary McAdams WG7X using an IC-7410; a combined 15 / 80 station managed by Dan Vacanti KD7SV using a Flex 6500; a 20-meter station managed by Mike Mikuchonis W7XTZ using an IC-756 Pro III, and a 40-meter station managed by Ellen Hardin AI7FP Using a Flex 6400.

Just contact the above-mentioned station managers if you want to work with them.

The second picnic is the annual August picnic which started out like this (taken directly from the club website): Jim K7LYM (SK) and Judy Kirkreit AJ7R were very active members of RCT. Jim was President of the club in 1994 and 1995, and he received the Doc Spike award in 1995. Judy remains a lifetime member of the club.

RCT had long held a summer picnic, known as "DK at the Beach", at the Owen Beach waterfront area of Pt. Defiance Park. In addition to socializing and consumption of tasty picnic fare, this activity typically included field operation of equipment along with antenna demonstrations and shootouts. In 2006, the Tacoma Park Service rendered the Owen Beach location less desirable by raising fees and making cooking facilities (grills and fireplaces) unusable. That year, the summer picnic was moved to Spanaway Lake, and beginning in 2007 the event became known as the Kirkreit Memorial Picnic.

For the last four or five years, the picnic has moved to Ft. Steilacoom Park in "Beautiful Downtown Lakewood (*Warsh*ington)"! The summer picnic this year will be held on Sunday August 4th from 11 to 3. We will be in the back pavilion on the west side of the lawn (Shelter #1). As you come into the park, follow the road all the way back to the four-way intersection. To the front, will be the parking lot for the Waughop Lake trail, and to the left you will see a set of restrooms and the dog park. So, at the stop sign, turn right and follow the road all the way down to the barricade. At that point there is a nice parking lot to your

SECRETARY'S REPORT

W7DK Secretary—Gary WG7X

immediate right which is only about 100 feet (maybe less) away from our picnic pavilion.

Park and then ambulate to the pavilion for a nice picnic. Hopefully, the weather will cooperate and be warm this year. It is funny, but every year that I can remember, the weather has been cool, so much so that sweaters are usually advised. Yes, even though we do it in August!

That's all for now folks—see you next month!

Gary WG7X, Secretary

Below: Field day in the tent on a beautiful Field Day from 2023 with lots of station activity

Above: Chuck AC7QN works with the "pedal power station" stationary bicycle while Warren NG7G looks on

Below: August 2022 picnic in full swing with a nice turnout on a sunny (but chilly) day.

All photos this page by Gary WG7X

HAM RADIO WORLD NEWS

Amateur radio events from around the world

W7UUU

THE END OF AN ERA: MFJ is shutting down. Many have surely heard by now that Martin F. Jue, founder of one of the biggest manufacturers and resellers of ham radio gadgets, is closing his doors. Rumor has it that offers from both GigaParts as well as DX Engineering (both heavy resellers of MFJ products) were turned down. Other long-time famous brands in the ham radio world will go down with MFJ, as they are brands that were purchased in previous eras that likely won't have a chance to be spun off. These include Ameritron amplifiers, Mirage amplifiers, Hygain antennas and rotator systems, Cushcraft antennas, and Vectronics kits and associated items. And of course, the vast array of MFJ branded tuners, keyers, paddles, meters, antennas, and countless other bits and bobs for every shack.

Mr. Jue made the announcement recently in his personal Facebook and it reads as follows:

April 25, 2024

"*Dear Fellow hams and Friends,*

It is with a sad heart as I write this letter.

As many of you have heard by now, MFJ is ceasing its on-site production in Starkville, Mississippi on May 17, 2024. This is also the same for our sister companies: Ameritron, Hygain, Cushcraft, Mirage and Vectronics.

Times have changed since I started this business 52 years ago. Our product line grew and grew and prospered. Covid changed everything in businesses including ours. It was the hardest hit that we have ever had and we never fully recovered.

I turned 80 this year. I had never really considered retirement but life is so short and my time with my family is so precious.

I want to thank all of our employees who have helped build this company with me over the years. We have many employees who have made MFJ their career for 10, 20, 30, 40 and more years.

We are going to continue to sell MFJ products past May 17, 2024. We have a lot of stock on hand. We will continue to offer repair service work for out-of-warranty and in-warranty units for the foreseeable future.

Finally, a special thanks to all of our customers and our dealers who have made MFJ a worldwide name and a profitable business for so many years. You all are so much appreciated.

Sincerely Yours, 73s

Martin F. Jue, K5FLU"

Very much the end of an era—MFJ will be missed by many.

■ *-editor*

THIS MONTH'S EDITORIAL placement is intentionally *after* the Ham Radio World News page for a reason: it deals with the shocking announcement that MFJ is closing its operation and selling off all remaining stock.

Not only will the global ham population lose all the many MFJ branded products but also Cushcraft, Hygain, Ameritron, and Vectronics… all names long established in the ham radio world. How many years have hams blasted the name because it lends itself so well to mean "Mighty Fine Junk"? I can't tell you how many times I've seen and heard that said not only on internet forums but in person by fellow hams at the clubhouse and at ham fests.

So are all those hams now getting excited to dance on the grave of MFJ and all the other brands the name represents? Do they all think that some new company will finally take over, offering similar products to this vast niche market, and hams will no longer have to think about "more fine junk"?

The loss of MFJ to the ham radio world is a loss of epic and tragic proportions! Sure they did have some product issues over the years—but what manufacturer hasn't? MFJ's customer service was always excellent in the few instances I've ever had to deal with them. Only twice did I receive an MFJ product that was defective out of the box and in both cases, the problem was resolved quickly and fully to my satisfaction.

I'm reminded of all the times I heard the same about Radio Shack ("Rat Shack, Rat ****, etc.) and yet I believe if hams are being honest, not one doesn't regret having a Radio Shack store just a few minutes' drive from home for a needed resistor or coax connector, when even Amazon or eBay couldn't get a needed part here in time.

The loss to the ham community of MFJ goes far beyond the loss of Radio Shack. Products from MFJ were around 10% (or more) of shelf stock at HRO, GigaParts, DX Engineering and R&L Electronics. Not to mention that 20 pages of paid advertisement in QST all derived from MFJ… how will that revenue be replaced by an already-struggling ARRL financial situation?

My sincere hope is that a "last minute" savior will appear (perhaps GigaParts or DXE after all) to acquire the manufacturing, patents, and assets of MFJ so the world of ham radio operators won't in fact lose this resource. Only time will tell.

Dave W7UUU, editor

ARRL NEWS & VIEWS

What is the League up to this month?

W1AW

AS MANY RADIO AMATEURS observed on Wednesday May 15th, the popular ARRL Log of the World (along with some other key ARRL systems) went down. As of this writing (May 27th), things have not yet been restored but confidence inside the ARRL is high. I wish them all the best in a speedy recovery to what is most assuredly a very stressful situation for the League.

The full news release from the ARRL:

ARRL Systems Service Disruption

Updated 5/22/2024

We are continuing to address a serious incident involving access to our network and systems. Several services, such as Logbook of The World® and the ARRL Learning Center, are affected.

We have heard from many LoTW® users, asking about the status of the service and its data. This is not an LoTW server issue, and LoTW data is secure.

Our editorial and production team is preparing the July issue of QST magazine, which is still going to press. It may be delivered a few days late to members who receive print subscriptions. The digital edition should be published on time.

We appreciate your continued patience as our staff and others work tirelessly to restore affected systems.

This story will be updated with new developments.

Updated 5/17/2024

Some members have asked whether their personal information has been compromised in some way. ARRL does not store credit card information anywhere on our systems, and we do not collect social security numbers. Our member database only contains publicly available information like name, address, and call sign along with

ARRL NEWS & VIEWS

What is the League up to this month?

W1AW

ARRL specific data like email preferences and membership dates.

Original story below:
5/16/2024

We are in the process of responding to a serious incident involving access to our network and headquarters-based systems. Several services, such as Logbook of The World® and the ARRL Learning Center, are affected. Please know that restoring access is our highest priority, and we are expeditiously working with outside industry experts to address the issue. We appreciate your patience.

This story will be updated with new developments.

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Upcoming ARRL Division Conventions and other major conventions

June 15 | Knoxville Hamfest, ARRL Delta Division Convention, Knoxville, Tennessee

June 28 - 30 | HAM RADIO, Friedrichshafen, Germany

July 12 - 13 | HamCon: Zion, ARRL Rocky Mountain Division Convention, St. George, Utah

August 17 - 18 | Huntsville Hamfest, ARRL Southeastern Division Convention, Huntsville, Alabama

August 22 - 25 | Northeast HamXposition, ARRL New England Division Convention, Marlborough, Massachusetts

September 28 | Red Rivers Radio Amateurs Hamfest, ARRL Dakota Division Convention, West Fargo, North Dakota

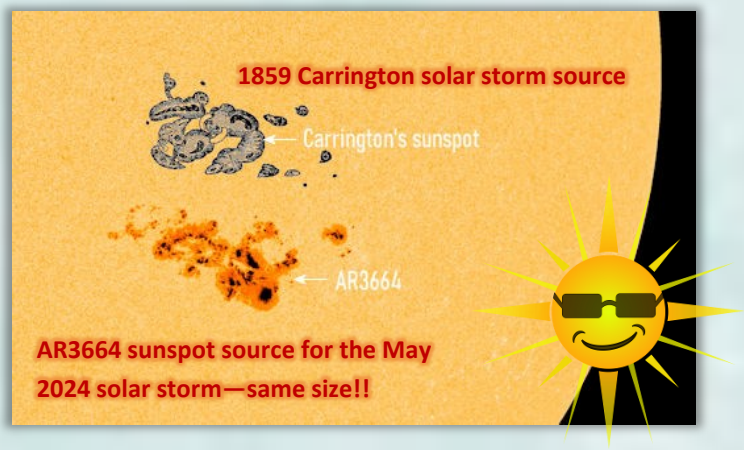
October 18 - 20 | Pacificon, ARRL Pacific Division Convention, San Ramon, California

SPACE WEATHER NEWS

BY DAVE W7UUU

UNLESS YOU WERE LIVING under a rock during the week leading up to May 10th and 11th, you most certainly know that the Earth experienced one of the most potent solar storms in recorded history of such events. Not since 2003 has a similar storm occurred, and prior to that the Carrington Event of 1859 was by most measures the strongest. But the events of May 10-12 were not minor by any stretch—affecting the polar magnetosphere regions at such a level as to cause aurora to be seen as far south as Alabama and Texas, with a few reports as far south as Puerto Rico.

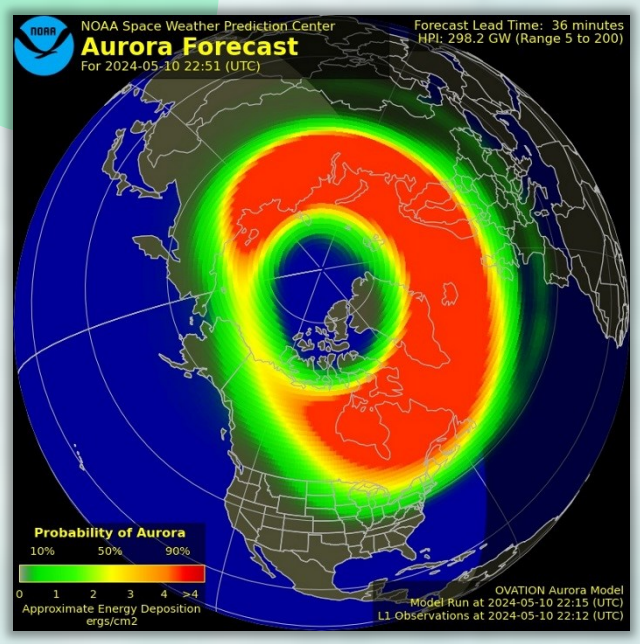
Luckily, other than remote and isolated reports of disruptions, the electric power grid, satellites, and the GPS system were all spared damage. This despite NOAA categorizing this storm as a G5 (see chart below for definitions) - the first since 2003.

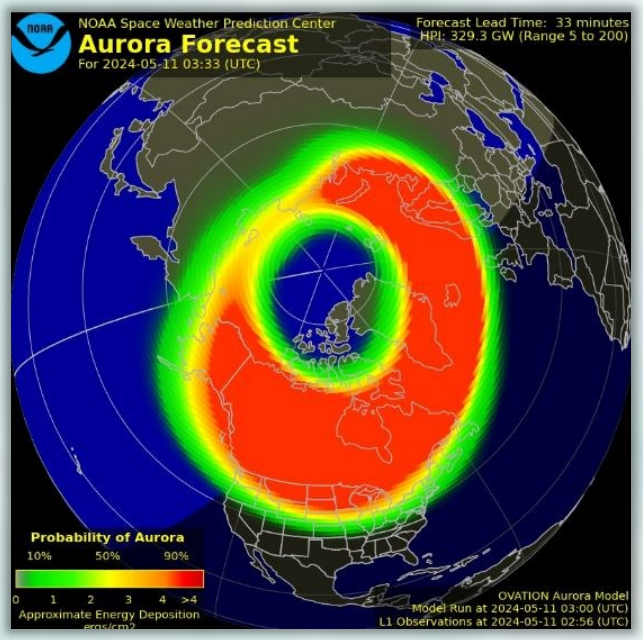

1859 Carrington solar storm source
Carrington's sunspot
AR3664
AR3664 sunspot source for the May 2024 solar storm—same size!!

Category		Effect	Physical measure	Average Frequency (1 cycle = 11 years)
Scale	Descriptor	Duration of event will influence severity of effects		
Geomagnetic Storms			Kp values* determined every 3 hours	Number of storm events when Kp level was met; (number of storm days)
G 5	Extreme	Power systems: widespread voltage control problems and protective system problems can occur, some grid systems may experience complete collapse or blackouts. Transformers may experience damage. Spacecraft operations: may experience extensive surface charging, problems with orientation, uplink/downlink and tracking satellites. Other systems: pipeline currents can reach hundreds of amps, HF (high frequency) radio propagation may be impossible in many areas for one to two days, satellite navigation may be degraded for days, low-frequency radio navigation can be out for hours, and aurora has been seen as low as Florida and southern Texas (typically 40° geomagnetic lat.).**	Kp=9	4 per cycle (4 days per cycle)
G 4	Severe	Power systems: possible widespread voltage control problems and some protective systems will mistakenly trip out key assets from the grid. Spacecraft operations: may experience surface charging and tracking problems, corrections may be needed for orientation problems. Other systems: induced pipeline currents affect preventive measures, HF radio propagation sporadic, satellite navigation degraded for hours, low-frequency radio navigation disrupted, and aurora has been seen as low as Alabama and northern California (typically 45° geomagnetic lat.).**	Kp=8	100 per cycle (60 days per cycle)
G 3	Strong	Power systems: voltage corrections may be required, false alarms triggered on some protection devices. Spacecraft operations: surface charging may occur on satellite components, drag may increase on low-Earth-orbit satellites, and corrections may be needed for orientation problems. Other systems: intermittent satellite navigation and low-frequency radio navigation problems may occur, HF radio may be intermittent, and aurora has been seen as low as Illinois and Oregon (typically 50° geomagnetic lat.).**	Kp=7	200 per cycle (130 days per cycle)
G 2	Moderate	Power systems: high-latitude power systems may experience voltage alarms, long-duration storms may cause transformer damage. Spacecraft operations: corrective actions to orientation may be required by ground control; possible changes in drag affect orbit predictions. Other systems: HF radio propagation can fade at higher latitudes, and aurora has been seen as low as New York and Idaho (typically 55° geomagnetic lat.).**	Kp=6	600 per cycle (360 days per cycle)
G 1	Minor	Power systems: weak power grid fluctuations can occur. Spacecraft operations: minor impact on satellite operations possible. Other systems: migratory animals are affected at this and higher levels; aurora is commonly visible at high latitudes (northern Michigan and Maine).**	Kp=5	1700 per cycle (900 days per cycle)

SPACE WEATHER NEWS

BY DAVE W7UUU


NOAA Space Weather Prediction Center
Aurora Forecast
For 2024-05-10 22:51 (UTC)
Forecast Lead Time: 36 minutes
HPI: 298.2 GW (Range 5 to 200)
Probability of Aurora
10% 50% 90%
0 1 2 3 4 >4
Approximate Energy Deposition
ergs/cm2
OVATION Aurora Model
Model Run at 2024-05-10 22:15 (UTC)
L1 Observations at 2024-05-10 22:12 (UTC)


NOAA Space Weather Prediction Center
Aurora Forecast
For 2024-05-11 03:33 (UTC)
Forecast Lead Time: 33 minutes
HPI: 329.3 GW (Range 5 to 200)
Probability of Aurora
10% 50% 90%
0 1 2 3 4 >4
Approximate Energy Deposition
ergs/cm2
OVATION Aurora Model
Model Run at 2024-05-11 03:00 (UTC)
L1 Observations at 2024-05-11 02:56 (UTC)

As the CME (coronal mass ejection) storm particles began impacting the magnetosphere, NOAA updated the OVATION (Oval Variation, Assessment, Tracking, Intensity, and Online Nowcasting) model's probability prediction of what areas in both hemispheres might see aurorae. On the left we see the expected zone of visibility to begin in the US Midwest, and not very deep in latitude. This was at 3:51 PM local time Friday. But just a few hours later, at 8:33 PM the zone of visible auroras had shifted West and dipped far down into the US, putting the Seattle area well within the 90% chance range. And sure enough, Seattle experienced more and brighter aurora displays than ever before. See below—images taken in quick succession by Peter Goodall of Seattle (the son of Richard, W7UDH)Fortunately, skies were totally clear for the entire event.

Photos: Peter Goodall

SPACE WEATHER NEWS

BY DAVE W7UUU

Photo: David Hutnik

Photo: Stevan Mayer

Photo: Gary Johnstad

Photo: Carolyn McKelvie

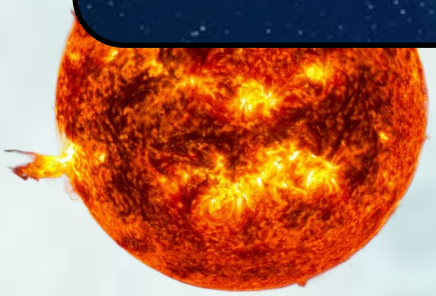
From Mineral Lake Lodge

Photo: David Hutnik

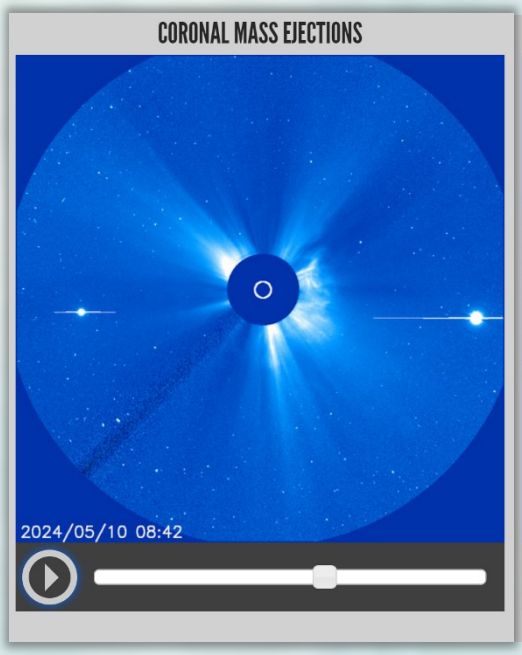
All photos as credited, from Mineral, WA area sent by Leslee Dunlap, KD7ZYQ May 10-12, 2024. Formatted to fit available space.

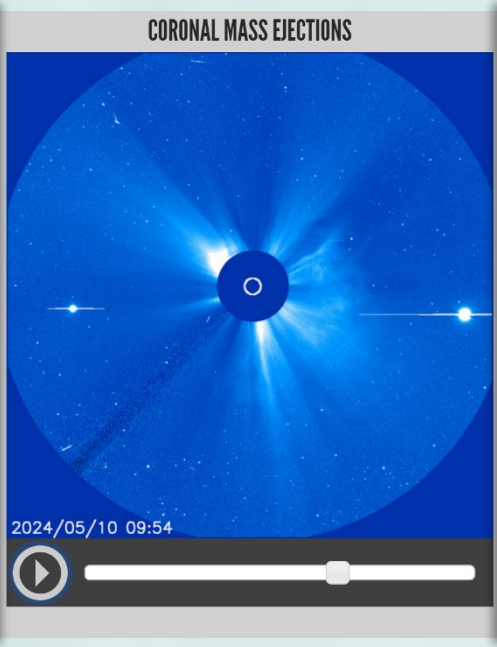
SPACE WEATHER NEWS

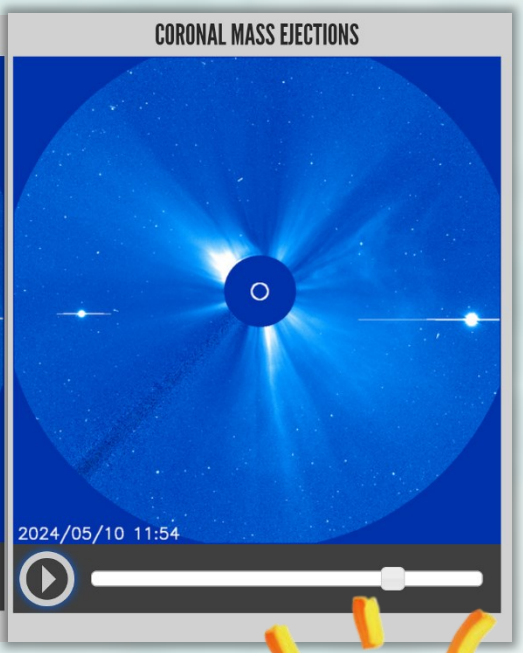
BY DAVE W7UUU



CME IMAGES FROM THE LASCO INSTRUMENT ABOARD THE SOHO PROBE



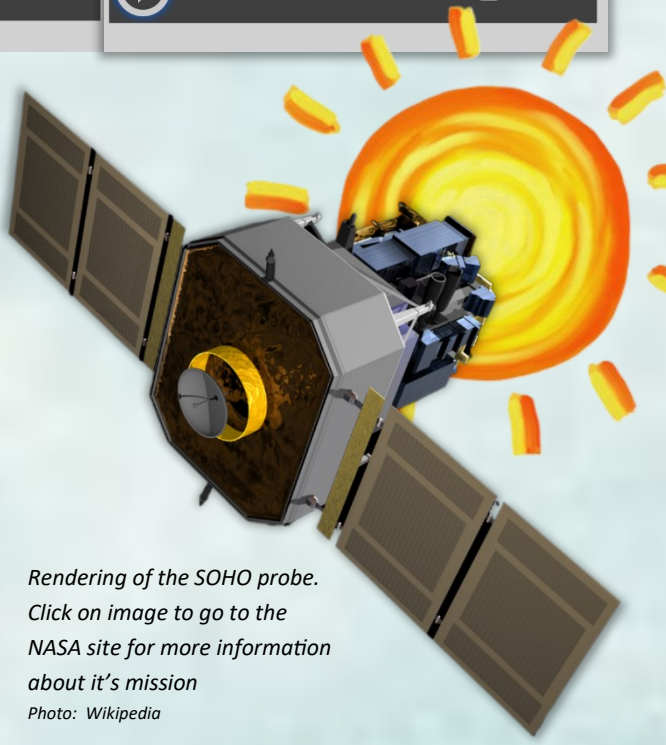




The images above are from the SOHO Probe (Solar and Heliospheric Observatory) launched in 1995 as a joint project of the EU Space Agency and NASA. It's objectives are to investigate the outer layer of the sun (6 separate data sensors to observe and record different parameters), to make observations of solar wind (two instruments) and to probe the interior structure of the sun (three instruments). The three images are from the LASCO instrument (Large Angle and Spectrometric Coronagraph) which blocks the disc of the sun, revealing the prominences and ejections from the surface of the sun. The first image at 8:42 shows the beginning of the CME that started the G5 solar storm. In image 2 at 9:54 the ejection is seen much farther away, and by the third image at 11:54 it's well on its way to earth.

It's astounding that this probe, with all these instruments, has been in constant service for over 30 years despite having a design goal of only two!

To see a full animation of this sequence, "right click" on any of the images and "Open link in new window".



Rendering of the SOHO probe. Click on image to go to the NASA site for more information about it's mission

Photo: Wikipedia

SPACE WEATHER NEWS

BY DAVE W7UUU

SO JUST WHAT DOES an aurora have to do with ham radio exactly? This can be a pretty complex topic due to all the physics involved. But the easy answer: a visible aurora (all the pretty shimmering lights in the night sky!) is pretty awesome to see—but it's very much an indication of some pretty serious activity on the sun, and can cause massive changes in how radio propagation works.

For the HF bands, radio operators most often think of a CME (coronal mass ejection) as causing an imminent shutdown of the HF spectrum as the absorption levels in the ionosphere rise. At that point, HF operation usually becomes very difficult.

But for VHF (and to some extent 10, 15 and even 20 meters), things can get really interesting as the CME hits the ionosphere. An effect known as Auroral Propagation and also as Auroral Backscatter can occur above certain latitudes. The highly charged particles striking the ionosphere can create a very reflective layer for VHF frequencies, usually beginning with 6-meters and up (but sometimes lower frequencies as well).

Backscatter gets its name from the reflective action of the charged layer of the ionosphere where the aurora is happening. In practice, this means an operator aims a high-gain antenna into the auroral zone, and the radiated signal will in effect travel backwards! Likewise with received signals. The antenna is pointing North, but signals are heard and contacts made with stations to the South (or other directions).

Good antennas (and usually higher power) are essential when using auroral propagation. Beam antennas are required and must be rotated to point towards the auroral zone (North for us in the Northern Hemisphere, and to the South for our neighbors in the Southern Hemisphere). The beam heading will usually (but not always) end up being opposite where contacts are being made.

Modes matter! Because of the highly complex phasing action of RF striking the auroral zone, SSB voice becomes raspy and garbled… like "talking through a fan". CW notes are similarly rendered raspy and often almost whisper-like. Many CW notes will sound as if the transmitter has faulty AC filter caps!

Digital modes like FT8 can become useless—due to the unpredictable phase changes that are common with auroral propagation, the precise timing required by the FT modes fails, and decodes equally fail to happen.

It's a truly remarkable experience if you've never used this propagation mode. I never had until Friday May 10th, when I made a number of contacts via Auroral Backscatter. I recorded a few minutes of it, so **if you've never heard such signals, click on the video below**. -Dave W7UUU

MEMBER SPOTLIGHT

Nolan Glenn, K7GBM

Nolan K7GBM joined the Radio Club of Tacoma in May of 2014 (ten years ago last month!) as Member #2667. After 23 years as a US Army communications officer, he retired and for the last 24 years has served as a Pastor, most recently at the Greater Works Fellowship Church in Tacoma WA. During the Vietnam war, Nolan ran an Army MARS station helping his fellow soldiers to talk with their families back home.

Dear Editor,

I am a floundering ham in need of one or more of our Elmers.

The RCT Elmer Board provides names and phone numbers. Should I call or text to make first contact?

Personally, I never respond to phone numbers or texts from people not in my contacts. So I was wondering how to let the Elmer know I am not selling replacement windows?

I enjoy the newsletter, it's a great read.

73

John - *KJ7SJM*

Thanks, John for reaching out! I'm glad we were able to hook you up with Stephen AD7AB— you'll be in good hands. -ed

Dear Editor,

WOW! Amazing newsletter! Not sure why I haven't stopped to check it out before this issue. Back in my early years with W7DK, I was editor of a small paper version of the Logger's BARK. You've taken it a long way! Thank you for your time and effort on this amazing publication! It's great to see the old and the new.

Carry on! Blessings, 73, Kathleen Nace, *N0EYK*

PS Roger, K8RN (formerly K7AYC), SK, would be so pleased to see all that is still happening with W7DK!

From QRZ,

Another fantastic issue. I am guilty of occasional Aero-Mobile ops, alas my 737 gear is AM or USB only. The 2NT article was both informative and well timed! I just picked up a cosmetically perfect 2NT, 2-C, 2-AQ station ready for electrical restoration. In fact, the Hayseed Hamfest caps arrived yesterday. Now I'm super motivated. That "rag" you folks put together is just fantastic! I'm already looking forward to the next issue.

Well done to all and 73

Wes—*K3KW (PA)*

From QRZ,

WOW what a great newsletter. I spent more time reading it then the last few issues of QST combined. And I'm not even a club member.

Fred—*K2DFC (NJ)*

From QRZ,

I found the Articles from the Logger's Bark Magazine very informative & shared it with my Facebookers.
Tnx for your great Work.

73 de Uncle Günter, *DK5ONV (Germany)*

Dear Editor,

Any chance of sending a copy of this to that big building in Newington Ct. ?

You may have to fly out there to show them.

Fantastic Publication Sir !!

John—*W3HLS (MA)*

Dear Editor,

Hey, great job on the [WA7E air mobile] article! That newsletter is incredible in terms of all the content. Great to see that kind of club in operation.

At any rate, I am sending the .pdf of the article to my old Collins buddies that worked on the radios and digital 429 communication buss designs back in Lab 28. Unreal that something we worked on over 40 years ago is still in use! Back in those days, Collins spared NO EXPENSE on having a good design in place.

Nicely done Dave! 73

Toivo—*W8TJM (WA)*

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Beautiful Boat Anchors! Huge lot of BA rigs arrived on May 4th. These are Hammarlund HQ-140 & HQ-150 receivers

John, KA7RMG, aids John KJ7SJM hauling an entire trailer of donated BA gear into the lockup

John KJ7SJM loads yet more super-heavy old rigs on-to the dolly to haul into the lockup

John KA7RMG with a Hammarlund receiver and a Hallicrafters transmitter

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Tom W7TJL stops by the clubhouse to catch up on things he's missed over recent months away

Stephen AD7AB helps Paul (not yet a ham) with concepts and tech as he works on becoming a ham

Rebecca KK7IJZ stops by the clubhouse to pay us a visit and say howdy!

John KJ7SJM took a break from the Property Team loading a large donation into the lockup

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Planning Committee Chair Manny AD7MA finds the perfect donut in the kitchen on May 4th!

Nathan KK7QND and his brother Elliott hanging out in the Oakman Museum area of the clubhouse on May 4th

Becky KG7FZH talks HF with Gary WG7X in the HF room on May 4th (while perusing a printed edition of the previous month's Loggers Bark!)

Brad WA7BTC (left) and Ruff AI7RB chat it up in the classroom while Doc Spike W7OS (SK) looks on with a smile from his photo frame

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Adam W2NCC and Al N7OMS marvel at the new donations of boat anchor rigs in the lockup

Nolan K7GBM says, "Why enjoy a donut in the clubhouse when you can enjoy it outside in the sunshine?"

Stephen AD7AB assists Paul W7PFU in setting up his Yaesu transceiver with programming software

Manny (center) AD7MA leads a planning discussion with David AC7KP (left) and Bruce WE7P on May 11

Got pictures from the clubhouse? Send 'em in!

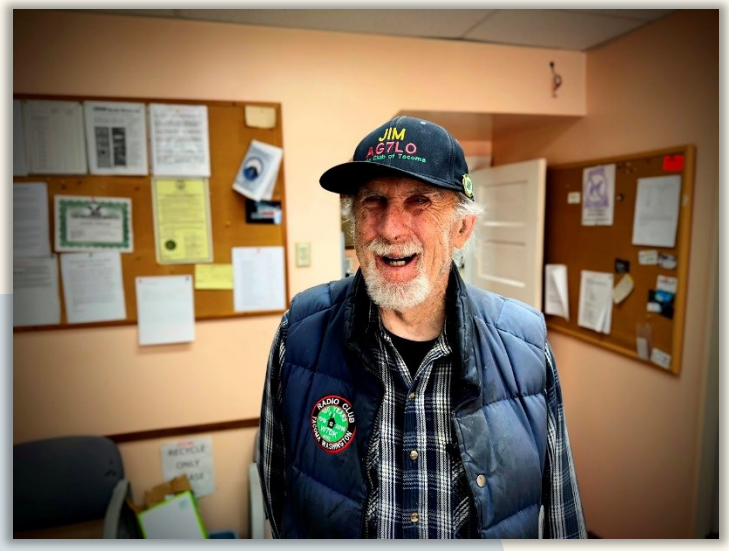
All photos this page provided by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Sam N9MII takes a break from work for a quick photo for the Bark! Thanks Sam!



Jim AG7LO pays a visit to the Mighty DK kitchen on May 11th

BJ WA7BJR sporting his vintage Monarchs Canada hockey team regalia! May 25th

Bob K7MXE gearing up to sort through a "box of rocks" (radio crystals) he just received from Jim W7LS

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Museum Curator Dan KD7SV hard at work sorting through the recent vast donation of boat anchor rigs

David AC7KP hanging out with Nolan KG7BM on May 25th, waiting for the hotdogs to finish cooking!

Adam W2NCC and Gary WG7X discuss the best thing to do with the stunning Heathkit Warrior amplifier that just came to the club. May 25th

Nathan KK7QND and his dad Randy KK7RHR joined the gang on May 25th

Got pictures from the clubhouse? Send 'em in!

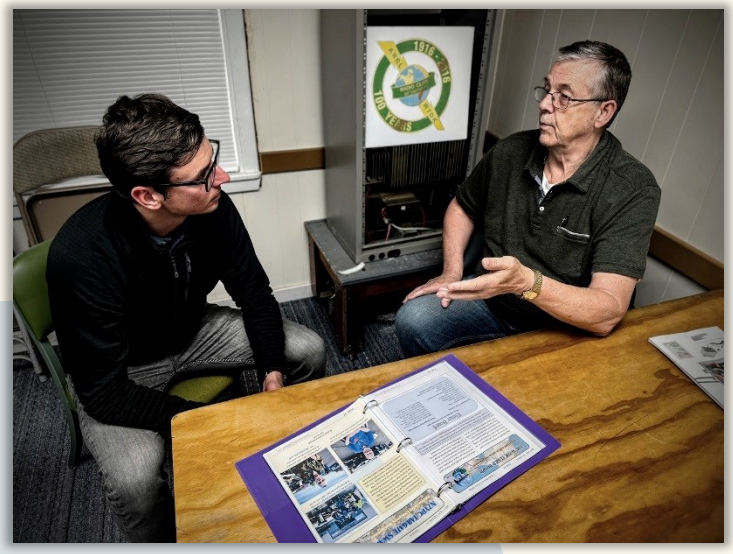
All photos this page provided by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Adam W2NCC chillin' with Ellen AI7FP May 25th



Mike W7XH (right) visits with a new ham and potential new member of the club

Bob K7BD picks up a few goodies at the mini-swap the club holds every month on the last Saturday—today, May 25th

Stephen AD7AB engaged in lively discussion with Scott KA7IOX and others in the Lou Room

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Walt WA7SDY selling his wares in the mini-swap on May 25th

Scott KA7IOX holds sway over his own table of goodies for sale

President Mike W7XTZ visiting fellow members in the Lou Room on May 25th

Warren NG7G stopped by to pay a visit

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Dave W7UUU

email loggersbark@gmail.com

AROUND THE CLUBHOUSE

Recent Photo highlights from the Clubhouse

Johnson Viking Valiant on its way into the W7OS Museum station lineup for future use on the air

One of the finest examples of the 100 pound Heathkit Warrior KW power amplifier from 1961 I've ever seen

Michael Mikuchonis	W7XTZ
William Stockho	W7SSN
Michael Drorbaugh	W7MKE
Joseph (Nick) Winter	K7MO
Paul Petach	KI6QXV
Angela Korn	KC7EQ
James Moore	KI7TPO
Travis Nesvacil	KK7LLT
Dave Ellison	W7UUU
Brian Terjeson	N/A
Brad Cullen	WA7BTC
Alexander Partington	KG7UMZ
David Burke	N7PKG
Sherry Miller	KG7THH
Mark Rader	KC7AFO
Aline Bell	KL7KTJ
Laura Moody	KK7NKL
Ronald Carper	KG7RKC
Lucy Key	KG7ONN
Lal Chandwaney	KJ7YSX

Another beauty just donated to the W7OS museum is a Hallicrafters SX-101 receiver that soon will be paired with the matching HT-37 transmitter. If this station comes to pass, I plan to spend a lot of time working CW on Saturday mornings from the Museum room!

June Birthdays!!

All photos this page by Dave W7UUU

THIS MONTH'S CALENDAR

Always check the W7DK website for latest news

W7DK

	May		June, 2024			July	
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
22	May	May	May	May	May	May	1
23	2	3	4	5 07:00pm Board meeting	6	7	8 General Meeting
24	9	10	11 07:00pm VE License Exam ...	12	13	14	15
25	16 POTA Dash Point State Park	17	18	19	20	21 Field Day Setup	22 Field Day
26	23 Field Day teardown	24	25	26	27	28	29
27	30	July	July	July	July	July	July

NEW LOCATION!!

Did you know?

June originates from the month of Lunius in the original Roman calendar used during the Roman Republic. The name June didn't enter the English language until the 13th century as Junye, Junie, Join, Juin, & Lun. The well-known variant Lune was in use until the 1600s (and as followed, the terms "lunatic" and "lunacy")

email loggerspark@gmail.com

RCT Bulletin Board

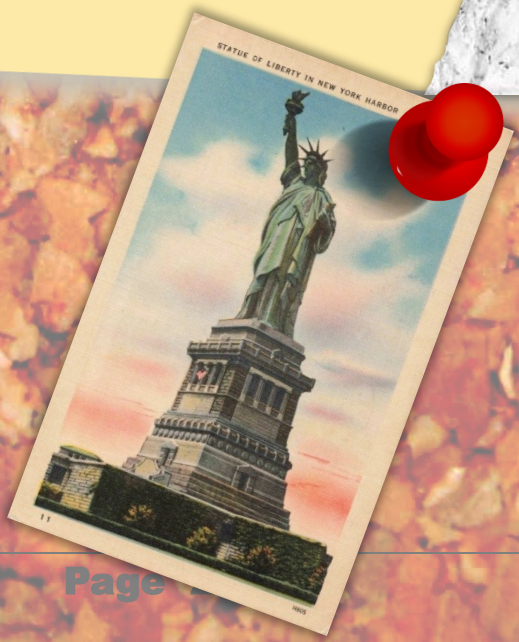
Posted notes and other important stuff

Here's a useful tip when reading the Bark: if you want to view a link, "right click" > "Open link in new window" - that way you won't lose your place in the Bark!

Stick it on your calendar NOW! W7DK picnic location is now booked—Shelter #1 at Fort Steilacoom (same as years past) 8717 87th Avenue SW in Lakewood

Date is SUNDAY AUGUST 4th 10 to 4

Last Month's Mystery Member: Your editor! Dave as WB7AWK at age 14, with my new General!



Last Month's Hidden Word: Well, no one guessed the RIGHT hidden word (Aston Martin) but plenty picked Chevrolet Biscayne so stickers were mailed to the first who got it! This month is a different sort of word....

HUGE thanks to Mr. Bruce Horn, WA7BNM for publishing his "Contest Calendar" for all these many years… a truly wonderful resource for finding virtually every ham radio contest on Earth that might be happening, in most any mode and most any region in the world. Follow the link to take you to the site, then sort through the various options to find the specifics of every upcoming event. For now, here's the WA7BNM Contest Calendar for the coming month

June 2024	
10-10 Int. Open Season PSK Contest	0000Z, Jun 1 to 2359Z, Jun 2
Tisza Cup CW Contest	0200Z-1459Z, Jun 1
Wake-Up! QRP Sprint	0600Z-0800Z, Jun 1
Kentucky QSO Party	1300Z, Jun 1 to 0100Z, Jun 2
IARU Region 1 Field Day, CW	1500Z, Jun 1 to 1459Z, Jun 2
ARRL Inter. Digital Contest	1800Z, Jun 1 to 2359Z, Jun 2
ARS Spartan Sprint	0000Z-0200Z, Jun 4
HA3NS Sprint Memorial Contest	1900Z-1959Z, Jun 7
VK Shires Contest	0000Z-2359Z, Jun 8
Asia-Pacific Sprint, SSB	1100Z-1300Z, Jun 8
Portugal Day Contest	1200Z, Jun 8 to 1200Z, Jun 9
SKCC Weekend Sprintathon	1200Z, Jun 8 to 2359Z, Jun 9
AGCW VHF/UHF Contest	1400Z-1800Z, Jun 8
GACW WWSA CW DX Contest	1500Z, Jun 8 to 1500Z, Jun 9
REF DDFM 6m Contest	1600Z, Jun 8 to 1600Z, Jun 9
ARRL June VHF Contest	1800Z, Jun 8 to 0259Z, Jun 10
4 States QRP Group Second Sunday Sprint	0000Z-0200Z, Jun 10
SMIRK Contest	0000Z, Jun 15 to 2359Z, Jun 16
All Asian DX Contest, CW	0000Z, Jun 15 to 2359Z, Jun 16
IARU Region 1 50 MHz Contest	1400Z, Jun 15 to 1400Z, Jun 16
Stew Perry Topband Challenge	1500Z, Jun 15 to 1500Z, Jun 16
West Virginia QSO Party	1600Z, Jun 15 to 0400Z, Jun 16
ARRL Kids Day	1800Z-2359Z, Jun 15
Run for the Bacon QRP Contest	2300Z, Jun 16 to 0100Z, Jun 17
NTC QSO Party	1900Z-2000Z, Jun 20
Ukrainian DX DIGI Contest	1200Z, Jun 22 to 1200Z, Jun 23
His Maj. King of Spain Contest, SSB	1200Z, Jun 22 to 1200Z, Jun 23
ARRL Field Day	1800Z, Jun 22 to 2100Z, Jun 23
SKCC Sprint	0000Z-0200Z, Jun 26

***WA7BNM** Contest Calendar data used with permission*

YOU! YES *YOU!* Do YOU have a skill you could pass on to new amateur radio operators? Do you possess a skill or piece of gear that you're willing to share with others to fix antenna problems, diagnose noise issues, drive a ground rod, teach Morse, help teach technical topics? If the answer is YES you too could be a W7DK Elmer!! Let any officer know what your skills are or how you could help new hams get a leg up on the hobby. And if you're one of those already on the list, are there any changes we should be aware of? If so please hit the email address (found bottom of page on the right) and let us know so we can update the W7DK Radio Club of Tacoma "Elmer Board".

NEW HAMS OR MEMBERS: If you are looking for help, and NEED AN ELMER to help guide your way, use this table! Find the skill you need on the left, then look for an Elmer Provider of that skill on the right and reach out to them. ALL of these Elmer's have committed to helping so please don't hesitate.

Elmer Board

Do you need help with some area in ham radio?

List of members' areas of interest.	Name/Call Sign /Phone Number/ Topic
1.Technical questions, Classes	Adam W2NCC 360-870-7894 (4,5,6,7,11)
2. Help with Code	Dave N7HT 253-363-1692 (1,2,4,6,8)
3. License Examinations	Steve AF7YD 253-988-087(1,2,7,10,11,13)
4. Antenna and Station planning	Dave W7UUU 253-820-0890 (2,4,6,9)
5. Antenna and Tower erection	Al N7OMS 253-495-9068 (10,12)
6. Buying new or used equipment	Mike W7XTZ 253-405-8095 (6,8,10)
7. Equipment repair	Stephen AD7AB 253-212-9437 (1,3,4,12)
8. Understanding and operating your equipment	Randy WB4SPB 253-761-9391 (2)
9. DX and Contests	Phil K7PIA 253-307-4781 (9,10,12)
10. Club and ARRL activities	
11. Using test equipment	
12. IRLP , Digital, SDR, ARPS, Winlink,Vara, Satellite	
13. Understanding How Electronic Circuits Work	

AS MENTIONED IN THE Around the Clubhouse section with a number of photos, RCT W7DK was endowed with a large selection of wonderful old Boat Anchor radios of various and sundry makes and models. The last thing I need is more such rigs in my shack. Over the years I've owned and operated just about everything you can imagine. The ones I have now are plenty.

But I freely admit I always have a weakness for old homebrew "Novice era" rigs. And sure enough, in this motherlode I spotted a 12" x 8" aluminum chassis with the unmistakable look of being just such a prize, complete with massive TV power transformer. Fearing damage during the loading into the lockup, I just plucked it from the stack and met up with the Property Team, made a quick offer, and took it home with me for the princely sum of $10.

Homebrew Novice-era MOPA transmitter: 6AG7 oscillator, 6L6 amplifier, 5Y3 rectifier—7-10 watts output
As found in the truck bed with all the other rigs

I can't really date it—is it a true MOPA (master oscillator power amplifier) transmitter from the late 1960s into the 1970s? Older? Newer but built with vintage parts sourced from Ham Fests? Hard to say. But one big clue: the power supply filter capacitor was a dual-section 30 uF 350wvdc type which surely puts the build date no later than maybe the 1980s and probably earlier.

I put it on the bench, and did the usual "bring it up on a Variac until the 5Y3 is able to rectify"… a practice that many abhor but others support (a topic for another article in the Bark!). After a few hours in hopes of success, I went full 120vac and threw caution to the wind…. popped in a known-good 7.033 crystal, connected a key and dummy load, and hit the key! All expectations of a wonderful note in my receiver were of course dashed… 60 cycle buzz that was spot on at 7.033 is all that was heard.

Unfortunately, I had no suitable capacitors on hand so off to the Internet to source a pair of 33uF 450wvdc radial-lead caps and a 3-position (center ground) phenolic terminal strip. (Side note: I lost *so much* stuff in my 2020 fire! I'd never have had to buy parts like these before then!).

(Continued on page 32)

New caps installed… the base of the old can capacitor is visible, abandoned in place. The left stud of the can (not visible) is used to support a new 3-terminal phenolic strip to support the new capacitors (2x, left) and the related wiring to complete the supply fix.

The new caps finally arrived today after a very circuitous route from California to here, with some 14 USPS transfers along the way. After lunch I took to the soldering station and in no time had the old can cap bypassed out, the terminal strip conveniently installed on one of the can terminals, and the new filter caps proudly perched upon their posts. Sure I could have gone all fancy and restuffed the old can, but for this exercise I just wanted to get the rig running. The results are outstanding! Perfectly stable clean operation on 40 or 80 meters. I may try retapping the tank coil for 40 and 30, as I do have a couple of very nice 30-meter rocks. But that's a project for another time.

Output is just as expected - 6 to 7 watts depending on crystal. Of course, back in the Novice era, power was rated by input (derived by plate volts times amps), which given the inefficiencies involved, would like have been listed as 20 or 25 watts in the book this design likely came from.

That's all for now—see you next month

-Dave W7UUU

The repaired transmitter putting out about 7 watts (up to almost 10 depending on the crystal used). Very solid tone, no chirp. I plan to replace all the missing "Dymo" labels that long since fallen off. I'll probably also change the tank coil to make it operate on 40 and 30 instead of 40 and 80. Another fun rig to put on the air and on into next winter for CX in November! See you on the air!

W7OS DOC SPIKE MUSEUM

Museum updates from the Curator

Filling in for Dan
Dave W7UUU this month

Dan
KD7SV

TUCKED HIGH ON A SHELF in the Northwest corner of the W7OS Museum you'll spot a non-descript small aluminum chassis, tightly packed with three large metal-can 12A6 tubes, a link-coupled tank coil, and a metal-can choke from an old WWII surplus SCR-522 "radio set", as it was called.

This little box is a tiny 75-meter AM transmitter built by club member Bob K7MXE way back in 1964, when he was a junior in high school. Bob did the design himself—you can still faintly see his notes and changes on the schematic (on next page). It was built for a friend, Mel Thorsen, K7YKH (SK), to be used in Mel's 1961 Chevy truck to check in to the 3970 KHz Noon Time Net (which still runs to this day).

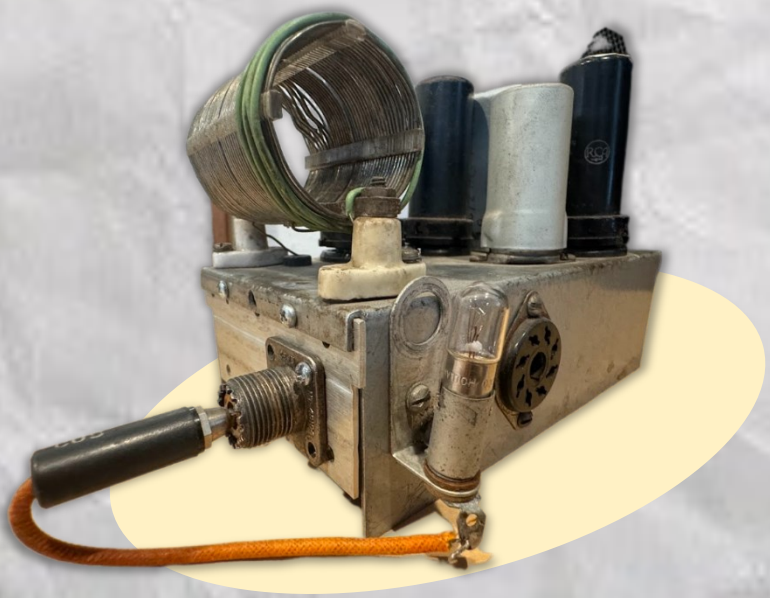
The design is very simple: A 12A6 crystal oscillator (3970 KHz crystal) drives a 12A6 amplifier. There's a 12AT7 mic preamp driven by a crystal microphone, which drives a third 12A6 used as the modulator. The final tube is plate modulated using the WWII choke salvaged from an SCR-522 as the modulation transformer. The design was 100% "junk box" from the parts Bob hand on hand at the time.

Alas, Bob never completed the transmitter. All work was done except the output link connection for the tank coil. This was completed many years later by Jack K7DBU, who also put together a banana plug and panel lamp "dummy load" and test indicator… he powered it up, and it worked!

In the photos, you can see the banana plug and lamp built by Jack. An octal socket near the lamp originally provided power from a Mallory 12vDC-to-250vAC power inverter to be mounted in the truck. Mel was already listening to the Noon Time Net, using a homebrew converter from QST, that converted the 3970 KHz net frequency to a frequency that could be tuned by the standard broadcast-band AM radio in Mel's car. Unfortunately, Mel never got to use the transmitter. But today, it's available for study and perhaps to even put on the air in the museum should someone be so inclined and technically able to do so. ■ *-editor*

Above: SCR522 modulator transformer far left, 12A6 oscillator center, 12A6 final right, and link-coupled tank coil. Black knob is AF gain, then power switch, and "set and forget" tuning capacitor in small hole on the right face.

Below: Banana plug and pilot lamp dummy load for testing and the octal socket for power. Silver tube shield is for the 12AT7 audio preamp, and lastly the 12A6 modulator tube.

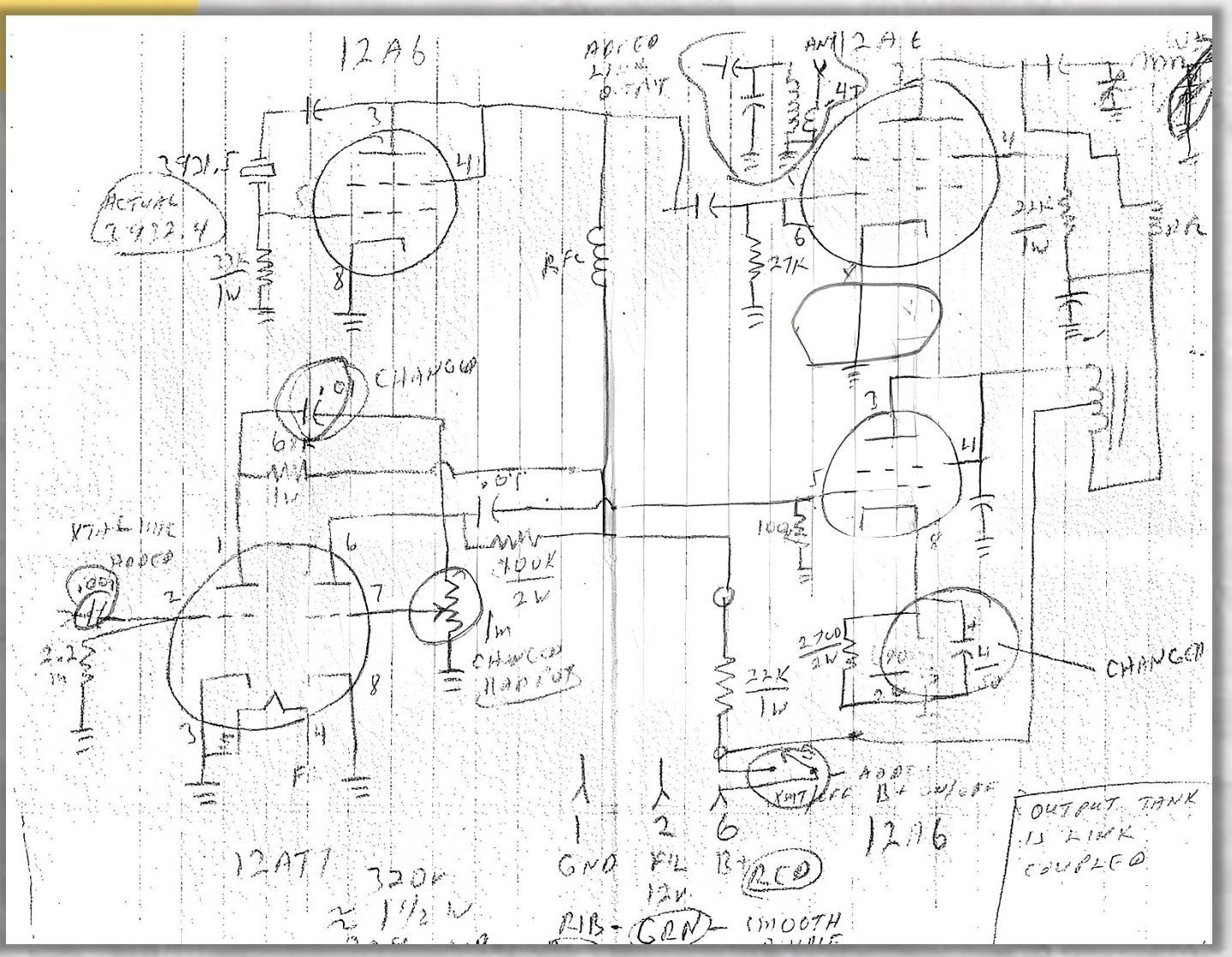


W70S D0C SPIKE MUSEUM

Museum updates from the Curator

Filling in for Dan
Dave W7UUU this month

Dan
KD7SV



Original schematic of the 75m AM transmitter built by Bob K7MXE around 1964. Top left is the 12A6 classic Pierce Oscillator (fundamental crystals required). It feeds a 12A6 beam power amplifier which at most would output 2 to 3 watts of RF to the antenna. Lower left is the 12AT7 microphone preamplifier that in turn drives yet another 12A6 beam power tube as the modulator, plate-modulating the 12A6 amplifier via the WWII surplus SCR-522 choke turned into a modulation transformer. Overall, it's a super-simple design—about as simple as you can possibly get to achieve the goal of 75m AM transmission. Original schematic is with the rig in the museum.

Radio Club of Tacoma W7DK 2024 Field Day Schedule

LOAD IN:

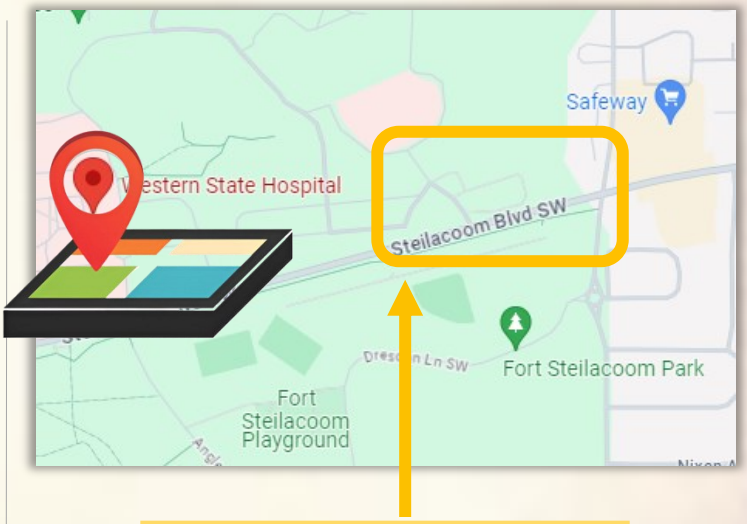
Friday June 21st: At clubhouse beginning at 9:00 AM. Setup at site begins at 11:00 AM

CONTEST/PICNIC:

Saturday June 22nd: 11:00 AM PDT the contest begins , running 27 hours ending at 13:59 PM PDT on Sunday. Stations must be set up prior to 11:00

LOAD OUT:

Sunday June 23: Load out begins after Logger's Breakfast—antennas at 2:00



FIELD DAY LOCATION:

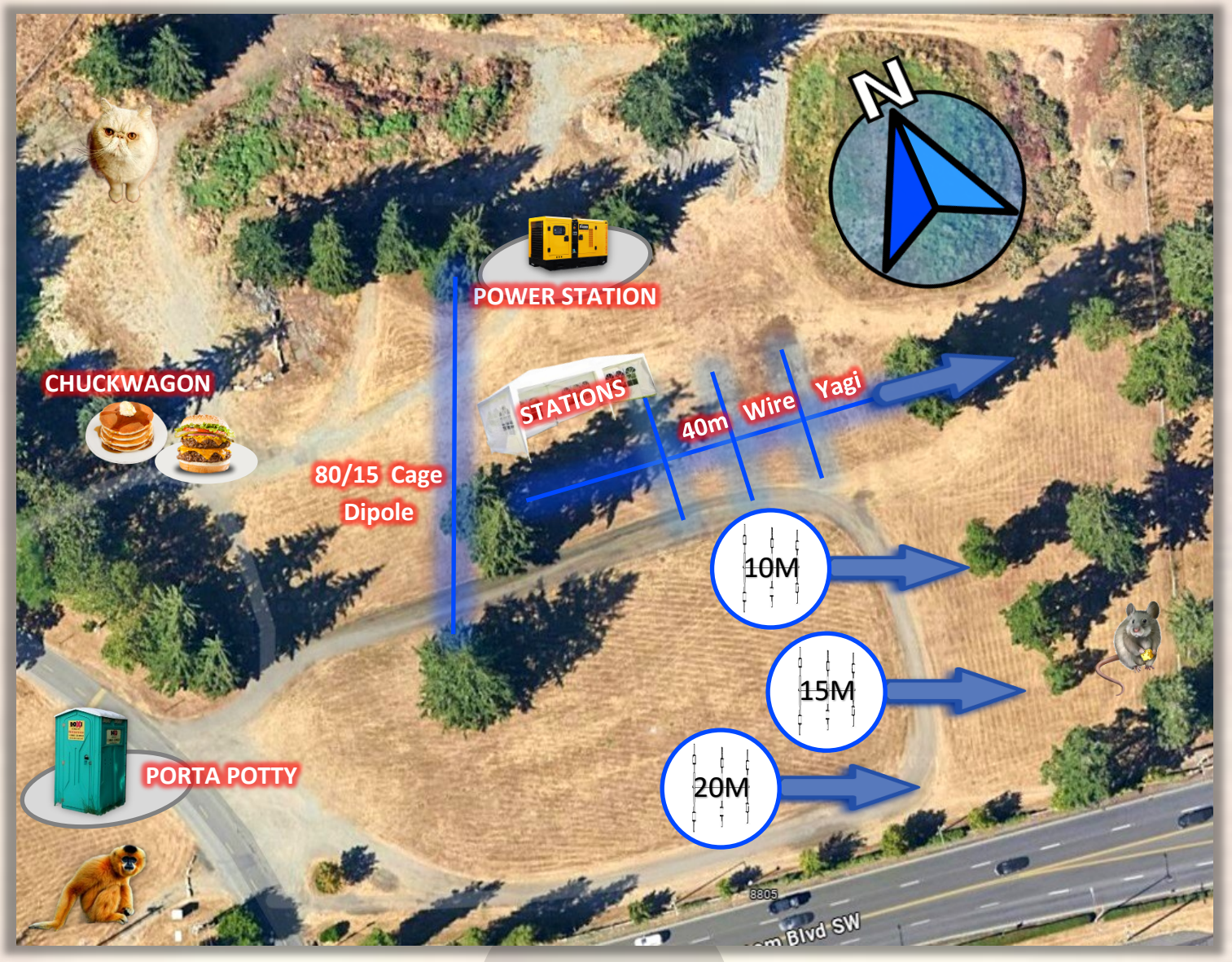
Western State Hospital
9601 Steilacoom Blvd. SW
Lakewood, WA 98498

Field day location is not actually inside the hospital entry gate but rather in the Eastern lawn area directly across Steilacoom Blvd. SW from the Fort Steilacoom Park and Playground area.

Note that despite being outside of the hospital facility proper, it is still a secured area. No drone flying or drone photography is allowed. There will be W7DK personnel on site 24 hours a day for the duration of our stay.

W7DK FIELD DAY 2024

THE DETAILS YOU NEED



Radio Club of Tacoma W7DK 2024 Field Day Antenna Plan

Cast & Crew

STATION MASTERS: We'll have a 4A operation.
80/15 Dan Vacanti *KD7SV* Flex 6500
40M Ellen Hardin *AI7FP* Flex 6400M
20M Mike Mikuchonis *W7XTZ* IC-756 Pro III
10M Gary McAdams *WG7X* IC-7410

ROCKET LAUNCHER CREW: 3 rocket launchers
Dan Vacanti *KD7SV* Lead
David Asher *W7GEL*
Evan Moyer *KI7ZEW*
Paul Nosal *N7OSS*
Kerry Harris *KI7LTV*
Joe Kubistek *KG7ZYB*
Jeff Winget *KK7PJR*

SAFETY OFFICER
Doug Schafer *AB7DG*

LOGGING/NETWORKING: Practice May 23 at RCT.
Randy Myers *WB4SPB*

PUBLICITY/PROMOTION
Deanna Jenks *KA7DCX*
PSA on radio KTQA 5/20 @6pm

KITCHEN
Paul Matney *WPFU*
Red Cranefield *WB7EC*

ANTENNA ASSEMBLY: 10, 15, 20M Yagis
Steve Dightman *AF7YD*
Randy Rumley *KK7RHL*
Jordan *W3NTA*

TENT SETUP
Doug Reynolds *K7FDR*
John Wheeler *KA7RMG*
John Buonora *KJ7SJM*
David Stilwell *AC7KP*

TRANSPORTATION
Brad Cullen *WA7BTC*
Mike Drorbaugh *W7MKE*

ON WEDNESDAY MAY 22nd, Randy WB4SPB set up an elaborate Field Day training station to help prepare new operators in the many facets of operating and logging contacts on Field Day.

Says Randy, "The practice session was conducted after a presentation on 'Search and Pounce' (S&P) Operating. Many good questions were asked. Then, we used two run station radios (IC-7610 and Flex 6600) in the upstairs HF Room and two S&P station radios downstairs. S&P ops sat at either a station in the Classroom (IC-7300) or a station in the Lou Room (IC-7410). The S&P stations each had an integrated laptop computer running the N3FJP Field Day logging program, so operators could practice both operating and logging.

All stations were connected to the patch panel using the clubhouse in-built cabling. At the patch panel, each station was connected to a separate dummy load. Since the dummy loads were within inches of each other, there was plenty of signal transfer even with the radios set to minimum power.

One run station operated from 28.300 - 28.400 MHz, the other from 28.400 - 28.500 MHz. The run operators would call 'CQ FD' until one or both of the S&P stations worked them. Then they would QSY a bit and CQ again.

At each S&P station, a practice operator would look for a run station between 28.300 - 28.500 MHz, tune them in and try to work them. As most of these operators were not very (or at all) familiar with HF operating, the first challenge was tuning-in a sideband signal. Coaching, and the IC-7300 waterfall display, helped a lot with this. Next was operating the logging program to enter the call sign and move between data entry fields in time to capture the exchange provided by the run station. Finally, giving the operator's own exchange always resulted in QSL and kudos from our FB run operators Gary WG7X and Mike W7MKE".

-Randy, WB4SPB

Randy WB4SPB (white shirt) helps train operators Photo Jim W7VK

RUN operator Mike W7MKE

RUN operator Gary WG7X

Randy WB4SPB (white shirt) working with those learning to S&P stations and log them

The entire session was also broadcast on Zoom for members to attend and watch from home

All photos this page provided by Jim W7VK

Gary WG7X and Mike W7MKE work out the plan for the Field Day "RUN" practice stations

FD Practice Team Leader, Randy WB4SPB (far right) begins the S&P training session

Becky KG7FZH preparing to record the KTQA-LP 95.3 FM Tacoma radio (& streaming) PSA announcing the W7DK Field Day event

Engineer Becky KG7FZH readies the gear while Al N7OMS, and Deanna KA7DCX stand by to record the PSA

All photos this page provided by Mike W7MKE

KTQA-LP Tacoma, FM 95.3 (streamed as well)

Producer Becky Friedman, KG7FZH along with Station Manager and Engineer, Sam Mulvey N9MII, created a 1-minute PSA announcement to publicize the W7DK Field Day event to the public via FM radio and streamed on the web at KTQA.org!

A longer version is in the works, but for now...
please click the YouTube thumbnail below to hear Becky's PSA
as voiced by W7DK Members Mike W7MKE, Deanna KA7DCX, and Al N7OMS.

-editor

Producer Becky, KG7FZH

Photo by Sam N9MII

From left: Mike W7MKE, Deanna KA7DCX, Al N7OMS

MIGHTY DK! QSO REPORT

Reporting all the HF QSO action from the club

EACH MONTH in the Bark, the Radio Club of Tacoma recognizes the members and guests who have made non-contest QSOs using the HF stations at our clubhouse. Saturday Open House, especially, is a time when members have access to this equipment. Why not sit down at one of our operating desks and make a contact or two? Assistance is almost always available for those unfamiliar with the equipment, and if your license class doesn't permit HF operation, ask the denizens of the HF Room or the Saturday clubhouse host to help you find a suitably-licensed control operator to sit with you. It's a feather in the club's hat for the call sign of The Mighty DK to be heard on the airwaves. So get on the air and get your name in the Bark! (Don't forget to *enter your call sign* as the operator into our logging program.) ■ *-editor*

Above: Phil K7PIA at the Flex Station

Below: The Gang's all here! Discussing HF plans

Clubhouse QSOs during this period:

NAME	CALL	QSOs
Jeff	W7JSJ	41
Mike	W7MKE	32
Mike	W7XH	26
Dave	W7GEL	24
Quentin	K7DRQ	2
Manny	AD7MA	1

Photos this page provided by Dave W7UUU

W7DK LOGGER'S CERTIFICATE

Classic "first award" for Members

HAVE YOU APPLIED for your own W7DK Logger's Certificate?! It's FREE and it's EASY! All you have to do is work at least 10 members of the Radio Club of Tacoma, then send in your list of call signs worked, and BAM! We'll print out your certificate and get it to you toot sweet by US Mail.

There are no confirmations required—no logs to submit—and really no rules other than the call signs you submit must be members of the club. You may work them on HF, 2m FM, on FT8 or SSB or any other mode! In fact, one of the best ways to get your 10 contacts is to check into the weekly Tuesday Night Net on the 147.28 club repeater… every Tuesday at 7:30 PM.

This venerable award was first launched in 1957, using certificate paper printed by club member Dick Ryan, W7RGD using a donated printing setup.

As of the date of this publication, there have been almost 700 certificates issued, including a few reissues over the years to replace lost certificates.

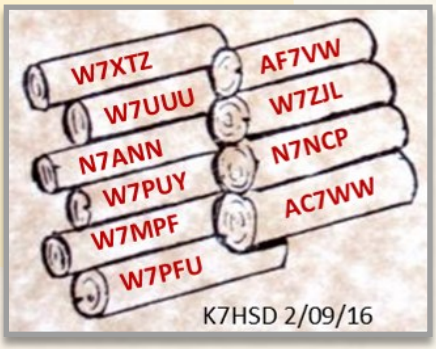
The original certificates were hand-lettered by long-time RCT member Barbara Osborne, W7UYL (SK 2022), and all of the records were kept in a series of recipe boxes still held by the club.

We still have a huge stash of this beautiful OFFICIAL logger's Certificate paper…. So if you do not already have yours, just shoot us an email with your list of call signs worked, and put "Logger's Certificate" in the subject line…

Send to loggersbark@gmail.com

Barbara Osborne W7UYL ca. 1955 at an RCT USO event

We also issue "Log Piles" for endorsements of each group of ten additional stations worked! So don't hesitate—get your Logger's Certificate or Log pile Endorsement *today!*



Wanna get yours? Send in those contacts!

THE WAY BACK PHOTO BOOTH

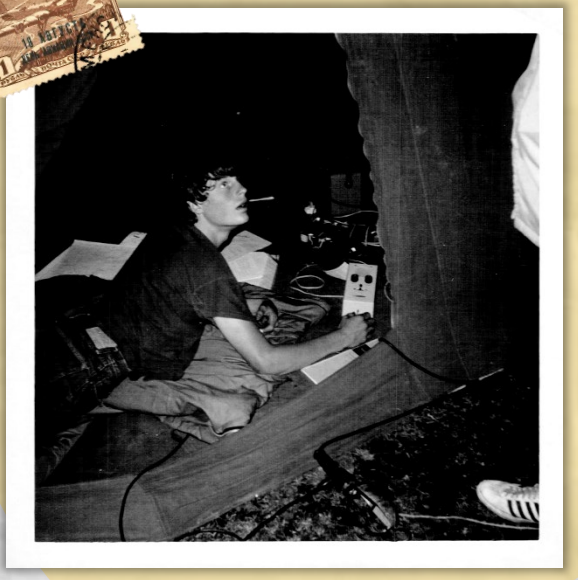
Highlighted photos from the club's past

Researched & Compiled by the Editor

Photo: Jim W7LS

FIELD DAY EDITION!

W7DK 1970 Field Day station in a trailer– Yaesu FRDX-400 receiver and FLDX-400 transmitter
A top of the line early Japanese setup. Judging by a zoom of the controls, this is the 80m position



Unknown young ham works his Heathkit HD-10 keyer in his Field Day tent—year not known but around 1970

All new gear in this 1949 W7DK Field Day photo: HR-50T receiver (center), SX-71 receiver below that, and Harvey Wells TBS-50 transmitter partially obscured by operator… ALL were 1949 models!

THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Editor

Photo: Jim W7LS

FIELD DAY EDITION!

Charles KD7UAN, W7DK Field Day 2012

Al N7OMS (foreground) at the GOTA Station W7DK Field Day 2008

Pete KK7QW at the W7DK Field Day 2008

Rich KR7W (back) and Chuck AC7QN at W7DK Field Day 2008

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Gary WG7X

THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Editor

Photo: Jim W7LS

FIELD DAY EDITION!

Group shot, DK Field Day 2022 Main Tent

Fuel Czar Nickolas K7MO, keeps the generator fed during Covid FD 2020 when masks were all the rage

Bruce (rear) WE7P, Pete KK7QW and Don (call unknown) at W7DK Field Day 2012

Al N7OMS working FT8 at W7DK Field Day 2022

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Gary WG7X

THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Editor

Photo: Jim W7LS

FIELD DAY EDITION!

Bruce WE7P taking a break at DK Field Day 2018

Val K7VAP working Field Day 2020 at the K7MO Field Day operation

Gary WG7X working Field Day 2020 at the K7MO Field Day operation

Adam W2NCC (left) and Dan KD7SV at W7DK Field Day 2022

Got pictures from the clubhouse? Send 'em in!

All photos this page provided by Gary WG7X

THE WAY BACK PHOTO BOOTH

Highlighted photos from the club's past

Researched & Compiled by the Editor

Photo: Jim W7LS

WHO IS THIS MYSTERY MEMBER?

If you think you know who our Mystery Member is, just send an email with your guess… first correct responder will win a

FREE QRZ Bumper Sticker!

Mailed right to your door!

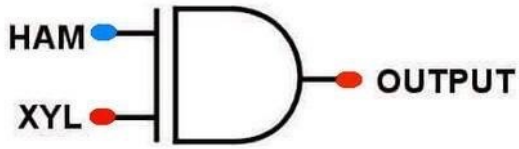
Wanna be featured?
Send In your photo!

email loggersbark@gmail.com

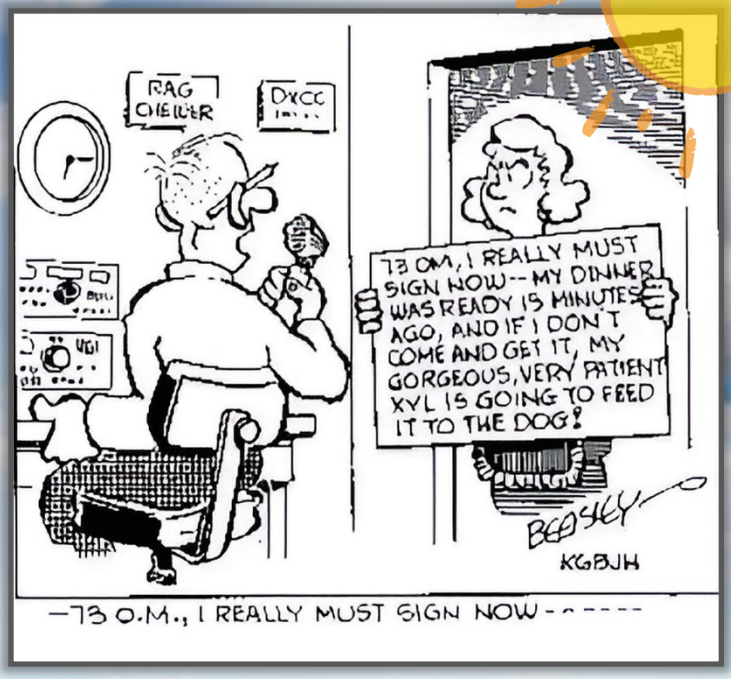
THE FUNNY PAPERS

Ham Humor for Humorous Hams

Logic gate for married radio hams



HAM	XYL	OUTPUT
WRONG	RIGHT	XYL IS RIGHT
RIGHT	RIGHT	XYL IS RIGHT
RIGHT	WRONG	XYL IS RIGHT
WRONG	WRONG	HAM IS WRONG


RAG CHEWER
DXCC
73 OM, I REALLY MUST SIGN NOW-- MY DINNER WAS READY 15 MINUTES AGO, AND IF I DON'T COME AND GET IT, MY GORGEOUS, VERY PATIENT XYL IS GOING TO FEED IT TO THE DOG!
BEDSLEY
KG6JH
—73 O.M., I REALLY MUST SIGN NOW - - - - -

Got a ham radio funny? Send it in!!

email loggersbark@gmail.com

HOW'S DX?

DXpeditions and Notable DX operations

Harald, D44TWO will be operating all modes, all bands as well as QO-100. Dan, K44KAN will be operating only on SSB on 80 through 10 meters as propagation permits.

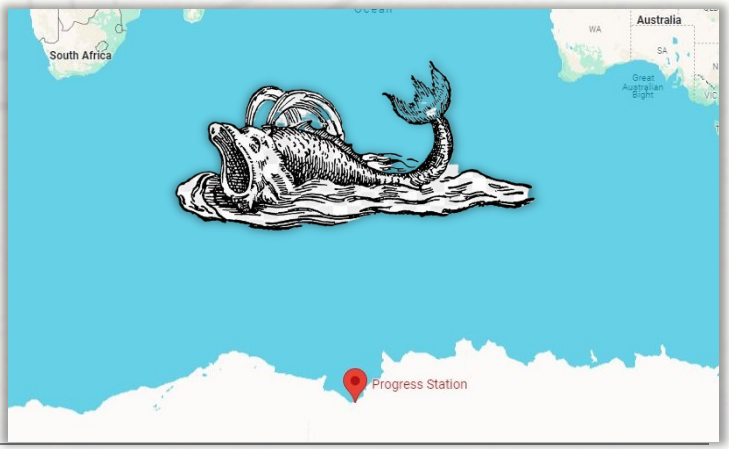
This is not a DXpedition as such but rather a "holiday -style activity". Unpredictable interruptions "are the order of the day" according to Harald.

QSLs will be different for each operator. D44TWO will be using M0OXO (see his details on QRZ) as his QSL Manager. D44KAN will be direct only or via eQSL. QSL details are on his QRZ page.

Operation will run from June 8 through June 20, 2024

This year offers a great opportunity to get Antarctica in the log if you've not done so. Igor, R8QK is currently very active on all bands from 40 to 10 meters, using both CW as well as FT8 as RI1ANE. Operations for this round began at Progress Base research station began on December 14 and **will continue through May of 2025**. Based on the number of spots for his station, at the time of this writing he's very active!

Best part is confirmations: Igor will QSL via LoTW, OQRS, Bureau, and direct via his QSL Manager RN3RQ. He received a large supply of QSL cards back in April so he's ready to confirm your QSO from the bottom of the planet most any way you choose!



Air Mobile: Piper Cherokee

With Bill W7NY

by Dave W7UUU

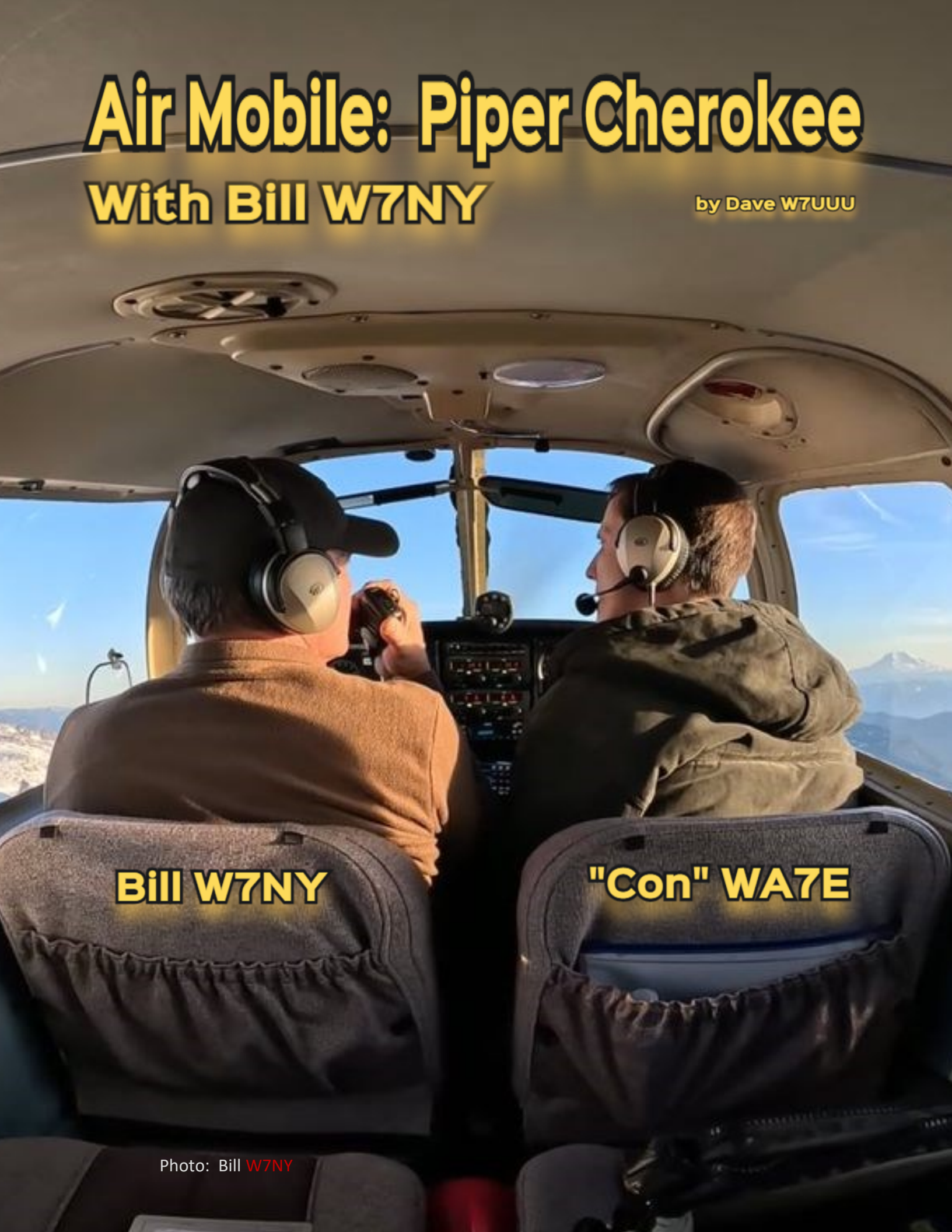


Photo: Bill W7NY

Air Mobile: Piper Cherokee

With Bill W7NY

by Dave W7UUU

IN LAST MONTH'S ISSUE of The Logger's Bark we featured part one of this two-part series, with Con WA7E and an overview of his Boeing 737 "Shack in the Sky".

This month we take a look at the other side of the "air mobile coin": General Aviation—civilian non-commercial flight just for the fun of it! Our ham in the pilot seat is Bill, W7NY, also of Gig Harbor just as Con from the previous article.

Bill began his flying career in the year 2000, while he was working as an agent with the U.S. Marshals Service. He retired as Chief Deputy U.S. Marshal for the District of Oregon, and went on to acquire his own plane... a beautiful two-tone white and blue 1966 Piper Cherokee 140.

Photos: Dave W7UUU

His on-board amateur radio setup has been a long "work in progress" to arrive at the well-integrated state that it's in today.

Bill first tried air mobile in October 2021, using a hand-held 2m transceiver. It was pretty much a big failure simply because the ambient noise level in the cockpit can vary from 80 decibels (at 75% power) to as high as 90 under some conditions. That alone makes using an HT problematic—not just for hearing return audio from the station you're talking to, but also the noise being fed into the microphone.

On top of that, the electrical interference noise inside a small aircraft cockpit can be pretty high as well. An HT was clearly not the solution.

Bill then moved on to a compact Icom IC-2300H mobile transceiver on a removable bracket at the bottom of the control panel. This was an improvement right off the bat, but there were still issues to be addressed involving noise. The first solution was to route the IC-2300H audio directly into the Piper's cockpit intercom system's auxiliary input. The intercom system is what allows passengers and pilot to chat with each other inside the noisy cabin of the plane, wearing headsets. This modification takes the receiver output of the Icom and feeds it directly into the noise-canceling aviation headset that Bill wears during flight. This produced a clean, noise-free receive audio with no discernable cockpit noise. Next on the agenda was addressing the transmit audio situation, where that ~80 dB of cabin noise

Air Mobile: Piper Cherokee With Bill W7NY

by Dave W7UUU

would drown out Bill's speech on transmit. To solve this, he bought a suitable Icom noise canceling mic which not only keeps the noise level down, but also reduces the likelihood of inadvertently transmitting ham operations on the ATC (air traffic control) radio, since it's a separate PTT switch.

At this point, things were definitely improving but Bill wasn't out of the water yet. There was still the issue of engine ignition noise from the 150 HP Lycoming engine that's just a couple feet away from the Icom transceiver.

FOR SPIN RECOVERY, USE FULL RUDDER AGAINST SPIN FOLLOWED IMMEDIATELY BY
NO ACROBATIC MANEUVERS, (INCLUDING SPINS) ARE APPROVED FOR NORMAL CATEGORY OPERATION

The Icom IC-2300H below the control panel

To solve this, Bill did some research and found a suitable DC noise filter (Kenwood PG-3B) that he then installed. That helped a lot, but the two engine-driven magnetos (the electrical generators that use rotating magnets to create the high voltage for the spark plugs) also produced a heavy electrical noise field that had to be addressed. Bill added Lonestar Magneto Noise Filters on both magnetos and the noise was reduced to an acceptable level.

Alas, he was still not out of the woods! The next hurdle was a fairly complex ground-loop situation that resulted in severe audio clipping. As Bill explains it, "the intercom auxiliary input is designed to automatically attenuate the input audio when audio is received on the ATC radio (ATC priority). It's a great and important feature, but it also became a detriment to my ham radio operations, even when no ATC audio was present.

This is because the Piper airplane's ATC radio's audio circuit, instead of being grounded back to the radio, is actually grounded to the airplane's frame. However, static build-up on the airframe during flight caused an inaudible ground-loop to be fed into the intercom auxiliary input. The intercom interpreted this as ATC audio resulting in attenuation of the Icom radio output"

Needless to say, this is a very unusual and unique ground-loop situation to solve. Initially Bill installed a ground loop isolator filter on the audio cable from the radio into the intercom input. But this was only partially successful,

Air Mobile: Piper Cherokee With Bill W7NY

by Dave W7UUU

Bill W7NY operating Air Mobile!

because as the static built up on the airframe it still managed to overwhelm the filter—and once again, audio clipping resumed.

A final solution was to install an audio "kill switch" on the ATC audio cable being fed into the intercom. Obviously this is only used when no ATC communications are required.

At this point, all of the audio issues relating to the IC-2300H and the aircraft audio system were fairly well addressed.

But since a big part of Bill's air-mobile amateur radio operation involves creating YouTube video content, there was one more problem to address: the audio feed from the plane's intercom system (with combined ATC, intercom conversation audio, and ham radio audio) was badly overdriven into the GoPro camera audio input. The final touch that completed the overall system was the installation of an appropriate audio attenuator in the audio feed to the camera to drop the overall feed to an acceptable level.

All of this experimentation and problem-solving took roughly a year and a half but is now complete and the recorded audio for Bill's videos is excellent.

Air Mobile: Piper Cherokee With Bill W7NY

by Dave W7UUU

The antenna is extremely simple: a 1/4-wave ground plane whip mounted on the underside of the plane, raked slightly aft to prevent it from whipping about in the 110 knot (126 MPH) typical cruising speed during flight. Given the altitudes Bill regularly flies and operates ham radio (3000 up to 9,500), his RF range is outstanding.

Operating solely on 2m FM simplex, to date Bill has amassed some 2000 total contacts, with many repeat QSOs, for a total of around 400 unique hams.

When asked "what would you consider to be your most memorable contact as air-mobile?" Bill responded, "I think my most memorable contact was with a 12-year-old boy while I was flying from Gig Harbor to Spokane. I was recording the flight on the GoPro cameras and captured the QSO. We were both thrilled to have made the contact and he was able to review it when I published the YouTube video. Very cool!". Exciting stuff for that young ham—it's not every day you talk to an airplane in flight using ham radio!

Another contact that stands out in Bill's memory is working Con WA7E (subject of last month's air mobile article) on the 10m band using SSB while Con was flying his 737 and later the same day, when Bill was aloft in his Piper, working Con (now at home) on 2m from the air. What a unique double-QSO opportunity for air-mobile fans!

Please take some time to view one or two of the videos at the end of this article—the captions explain what the "mission" was that day and most of them contain amazing imagery of the greater Pacific Northwest, as well as many contacts with hams all around the region. The author has had a number of QSOs with Bill to date, and one of those videos is linked as well.

A big thanks to Bill W7NY for his kind hospitality at his "neat as a pin Man Cave" hangar at the Gig Harbor airport, and for taking the time for the interview.

If you don't already, be sure to add 146.52 to your radio's scan sequence—you just might catch Bill calling CQ from the air one day soon!

-Dave W7UUU

Photo by Torsten Arnold, retired Alaska Air & F-16 pilot while flying in formation

Air Mobile: Piper Cherokee With Bill W7NY

by Dave W7UUU

STUNNING flight around Mount Rainier with Con WA7E. If you don't want to watch the whole thing, jump to the 20 minute mark for amazing closeup views of Mount Rainer. Lots of great ham radio contacts along the way.

Really cool low flyby of the Seattle waterfront on a beautiful day. No ham radio content but a really fun short video to watch Bill W7NY make the flyby.

"Right Click" > "Open in new Tab"

This video documents testing some of the noise and interference fixes as documented in this article. Bill has a nice chat on 2-meters with Dave W7UUU beginning at 4:38.

In this flight featuring a Mount Baker Stratovolcano overflight on April 14, 2024, Bill W7NY determines that all the glitches, gremlins, and interference issues in his radio and audio system have officially been fully sorted out.

LATE APRIL 2024 we traveled to Luna Pier, Michigan to spend a week in an Airbnb not too far from my kids who all live back there, and our new TWIN granddaughters Natalie and Nora who live in Erie, Michigan. I not only set up my IC-705 at the house on the shore of Lake Erie, we also set aside time to travel to a nearby Ohio state park, Maumee Bay (where my daughter was married last year!).

Conditions weren't great—it had rained a lot in the recent days, although it was quite sunny when we arrived. And very nice to learn that Ohio (unlike so many other states) doesn't charge for park access. Alas, the extent of the rain had made the grass very soggy in most places. So we had to settle for a picnic table in of all places the "archery paddock" where archers could practice shooting a fake deer and turkey, in addition to traditional targets.

My antenna for this venture was a PackTenna EFHW 40>10 supported by a SOTA-beams 7000hds 23' telescoping mast that I used during this trip, both for POTA as well as at the house.

Alas, conditions were not terribly in my favor. Noise levels were pretty high in the park—there are many substantial power pylons and 200+ foot radio towers in the immediate area, and that all combined to put a pretty good damper on my operations.

But FT8, as it's so often known for, came through in a big way to help me at least hit my required 10 contacts to qualify an activation. CW and SSB were pretty much out of the question with the noise floor, combined with my measly 10 watts PEP and fairly low EFHW antenna.

But it was still a ton of fun, and I managed to pick up a couple more states for my "trip total" (44 states, 33 DX) while we were visiting.

My plan, since we now have our wonderful grand-babies to come see, is to come back out every 6 months or so, and to ship ahead a full 100W "POTA Setup" with IC-7300 and all it needs for support. We'll store it at my son's house in Erie, MI and use it during our trip and have a full 100W rig to support my radio activities while visiting.

-Dave W7UUU

Dave W7UUU operating POTA at Maumee State Park, Ohio—US-1976 on April 30, 2024. IC-705, PackTenna EFHW, MS Surface for FT8 operation using WSJT-X

Got a POTA story with pics? Send it in!

THOUGHT FOR THE DAY

So often we as Elmers* (mentors) in Ham Radio only consider success when a new learner passes their license test. In the Ham Radio community, the most common practice for a learner is to take a cram course and hopefully remember enough of correct answers to pass the license test. When it comes to youth, ham radio and electronics, I'm thinking there needs to be an additional learning model available. A model that includes both the education (brain) and real world application (performance). In industry today, the terms most often used are education and training. In industry, classes can be tuned to either education or training. Or the combination of both.

Often the terms education and training are used interchangeably. These terms have different meanings. To use these terms interchangeably leads to fuzzy thinking on the part of a mentor. At any given moment, what is the purpose of the mentor-mentee interaction? For a productive learner's capacity, both the head knowledge and the skill of application need attention. Since there is no way to see inside a learner's brain, it is the formalized demonstration of the brain's content that the instructor will be assured of both knowledge and skill have been accomplished. And that is always a WIN! When not a win, that burden comes to the mentor, never the learner. And therein lies the mentor's challenge. What is it about that? - that the mentor has more to encourage the learner's continued engagement?

LAST MONTH's QUESTION: What books might a nine-year old read to help stimulate ham radio interest? The Hardy Boys *The Shortwave Mystery* and *Radio Rescue* by Lynne Barasch were recommended. This month has brought recommendations from Nick K7MO and Bob K7MXE for the Carl and Jerry series originally published in Popular Electronics. These monthly articles have since been republished into five volumes. As a boy I was an avid reader. *Popular Electronics* magazine was a birthday gift that helped me along the way. My copy of Volume 5 should be arriving soon.

Another book, *The Road Home* by Andrew Baze AB8L was recommended by Lloyd W7LRH. Lloyd commented that his son liked the story. It is a story set in the greater Seattle area, about a boy and his dad who are headed into the Washington wilderness when the BIG earth-

Got a Youth radio story? Send it in!

quake strikes Washington. I have not yet read the book so I am looking forward to the story of their challenges and family reunion. I ordered a second copy to give to a 12 year-old friend. So more about this book later when we both have had a chance to read it.

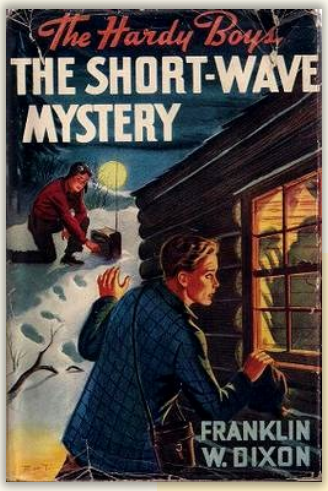
Lloyd also followed up with a second thoughtful email. He is part of the leadership team with United States Naval Sea Cadet Corps in Oregon. He makes the point that mentors would be wise to see if there is a regular activity that supports the interest of the learner. Lloyd hopes to establish a net using a bridged DMR/YSF room so Sea Cadet Hams can connect across the country. (Lloyd found this column on QRZ, in the News posting for *The Logger's Bark*. My heartfelt appreciation to QRZ for helping spread the word.)

As this June Logger's Bark is released, SEA-PAC will be in full operation. Next month I intend to report on the great connections at SEA-PAC, on the way to support our North West Youth Ham Radio Education Network.

* *Appreciation to Becky KG7FZH for her insights.*

For now, 73 from Steve AF7YD

stevedightman@rainierconnect.com



The Hardy Boys:
The Shortwave Mystery

By Franklin W. Dixon
January 1, 1945

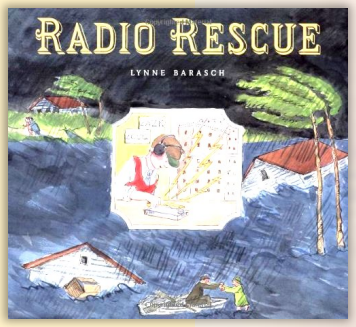
Long out of print but

can be found at many online book resellers

Radio Rescue

By Lynne Barasch
October 10, 2000

No longer in print but can be found at many online book resellers



The Road Home

By Andrew Baze
May 5, 2011

Currently still in print as bound material as well as in Kindle format on Amazon.com

EMERGENCY COMMUNICATIONS

Amateur Radio EmComm News & Topics

By Doug AB7DG

IN RECENT BARK ARTICLES, I've described the "I am Safe" system for assisting disaster survivors to send messages to distant loved ones. We call that "welfare traffic." As I mentioned in those articles, the computer application ("app") that we use to interface with a transceiver is called Winlink. In my five years of participation in our local ARES (Amateur Radio Emergency Services) organization, the mission of which is to assist emergency management public officials, it appears to me that substantially all disaster-emergency management radio traffic now is sent and received using Winlink. The Winlink app allows users to send messages between amateur radio operators much like email. Additionally, it offers many FEMA and other forms or templates in which a sender enters data. Only the data and the form ID are transmitted via radio to the recipient's Winlink inbox. When the recipient opens that message, their Winlink app imports that data into the correct form that then displays on the recipient's screen and can be printed or forwarded on a local network.

So whether a ham wishes to facilitate welfare traffic, like "I am Safe" traffic, or wishes to participate in ARES assisting disaster management officials, it is essential to become proficient using Winlink (aka Winlink Express, RMS Express, Winlink 2000, WL2K). Any licensed ham can download Winlink from https://winlink.org without charge, but a $25 donation is requested during the app installation process. The installation process on an MS Windows computer is not complicated. It may be possible to install Winlink on a Linux or Mac computer, per instructions on the website.

Once users install Winlink, they may become familiar with the app before even connecting it to their transceiver by using its "Telnet" mode (the internet) to exchange messages with Winlink users (addressed to their call sign) or email addresses. But when using a radio to transmit or receive a Winlink message, the radio connects to a remote Winlink "gateway" station (unless in a peer-to-peer mode). In Western Washington there are many FM Winlink gateway stations, and there are many HF Winlink gateway stations in North America and beyond. The Winlink app will list the gateways available to the user.

Users may link their computer to their FM transceiver with a simple USB cable and use Winlink Packet mode once they install and configure the Sound Modem app, freely available at http://uz7.ho.ua/packetradio.htm. But because Packet mode is considerably slower than Vara FM mode to exchange messages, most users will choose the latter mode that requires the Vara FM app, downloadable from Winlink.org or from https://rosmodem.wordpress.com. Most Vara FM users pay the $69 registration charge to allow full-speed

Got an EmComm story to tell? Send it in!

EMERGENCY COMMUNICATIONS

Amateur Radio EmComm News & Topics

By Doug AB7DG

(blazingly fast) use of that app, and one's registration number also grants high-speed use of the Vara HF app. Using Vara FM also requires use of a hardware sound card, and most users purchase either a DRA card (about $100) at https://masterscommunications.com, a SignaLink (about $100) at https://tigertronics.com or a Digirig card (about $70) at https://digirig.net. That sound card will also be used with the Vara HF app, but some HF transceiver's internal sound card may be adequate.

There is a wealth of online instructional and support material available for users to learn and master Winlink. One of the best sources is https://www.youtube.com/@WaveTalkers, that has playlists of many instructional videos for basic and advanced Winlink. There are many online groups at which users of Winlink and Vara support one another, listed at https://winlink.org/content/user_support_and_help. Also: https://groups.io/g/Winlink, https://groups.io/g/DRA/topics, https://sec-emcomm.groups.io, https://groups.io/g/RATPAC. And at http://www.emcomm-training.org there are tutorials and actual training exercises.

So if you are interested in EmComm for either welfare traffic or emergency management traffic, you ought to become proficient using Winlink.

-by Doug Shafer AB7DG

ARRL the national association for amateur radio®

ARRL Learning Center Features Two New Emergency Communication Training Courses

ARRL has released two new courses to train emergency communications (EmComm) operators for volunteering within the Amateur Radio Emergency Service® (ARES®). Both courses are within the ARRL Learning Center.

The Basic EmComm course is designed to get a new volunteer started. It provides basic knowledge and tools for any emergency communications volunteer and contains three modules and 11 topics, …

Read more – via American Radio Relay League | Ham Radio Association and Resources http://www.arrl.org/news/view/arrl-learning-center-features-two-new-emergency-communication-training-courses ■ *-editor*

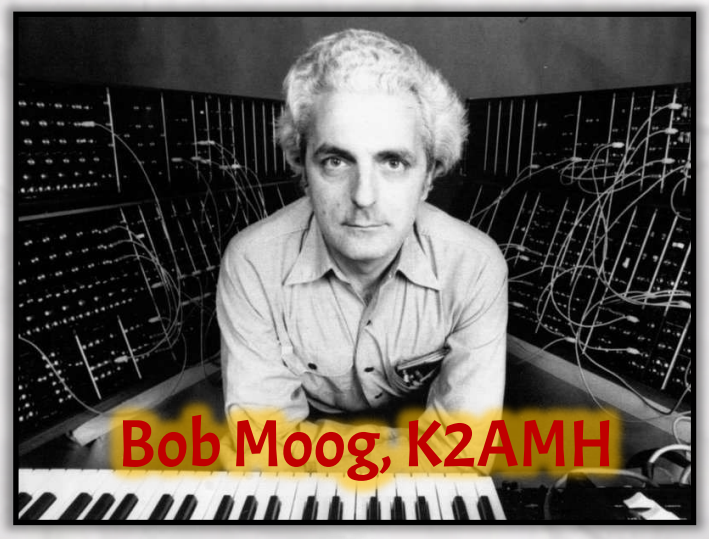
Got an EmComm story to tell? Send it in!

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

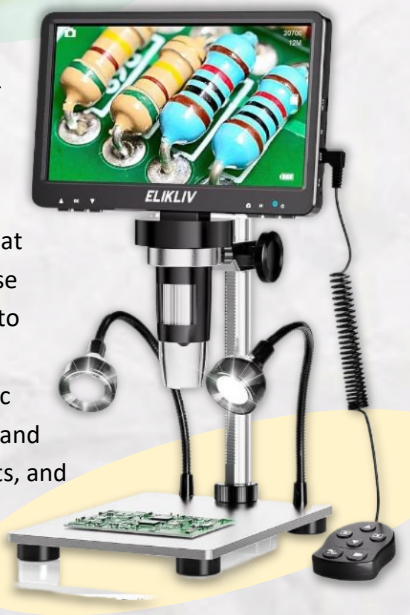
W7UUU

MOST HAMS know that a small handful of music personalities are or have been ham radio operators. Most famously of course would be Joe Walsh, WB6ACU, of The James Gang fame as well as The Eagles (and of course his own vast solo career). Then there's Ronny Milsap, WB4KCG, Steve "Woz" Wozniak WV6VLY, even astronaut Owen Garriott, W5LFL, and actor Tim Allen KK6OTD, and others…. but not many know that Bob Moog, inventor of the famous Moog Synthesizer that bears his name, was also a ham with the call sign K2AMH (SK in 2005). Moog is often considered the father of the modern synthesizer as we know it today in music. ■ *-editor*



Cool Tool

$79.99



I NORMALLY start this column by saying something like "every ham shack bench needs one of these!". But this month, I won't say that at all. It's just "one of those things you simply want to have but don't really need"… it's an electronic microscope for viewing and working with tiny circuits, and especially SMD (surface mount) components. There are many of these devices on the market—all of course with unknown Chinese names and it's likely they all come out of the same factory anyway. But this is the one I purchased on Amazon for about 80 bucks total. It offers a 7 inch LCD screen, 1080p resolution, 12 megapixel camera and optically up to 1200x magnification (pretty dodgy that high though—but you don't need that for PCB work). The remote control is for taking pictures and video so you don't blur by touching the monitor. You can easily connect to a PC or Mac for a much larger picture. You can insert a microSD card (not included) to store photos and even videos . Having the video function could be useful to someone making YouTube videos. One of the things I really like is it uses an internal LiPo battery for easily an hour or more of operation without having to plug in. The only drawback for me is the platform size is small so only smaller PC boards will fit. But for 80 bucks, I consider this to be a really useful addition to my shop. Click the image to see on Amazon ■ *-editor*

STRAY TOPICS OF INTEREST

MYSTERY RADIO

W7UUU

Photo by W7UUU

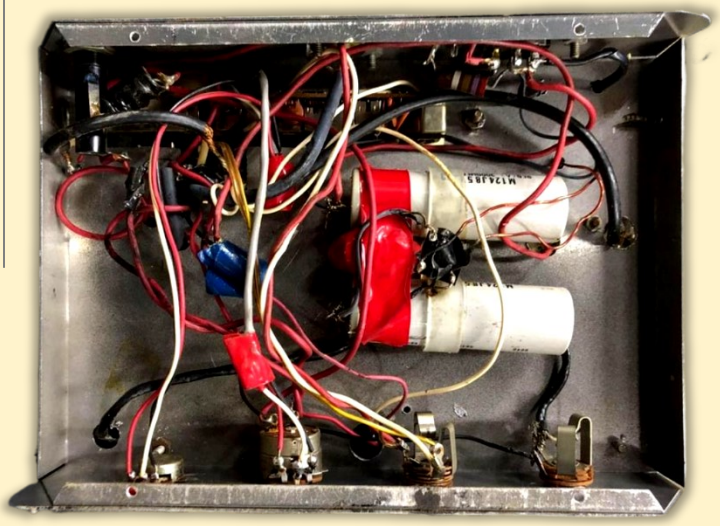
AT THE RECENT UNION GAP (Yakima) tailgate hamfest, I spotted this odd little Swan transceiver on a table for $50. It caught my eye because it just looked, well, *odd…* sure, it says Swan right on the front. But then, I noticed the labeling: one knob called TRANSMIT but paired with another knob labeled RECEIVER. In the center is a green indicator labeled X-MIT… not XMT or XMIT. The Micronta meter was also a dead giveaway - clearly a Radio Shack item with a red "S" added below the scale.

Along the bottom, the barely legible Dymo label spells out 2-meter frequencies, strongly suggesting it is a 2-meter FM transceiver as the crooked label below the X-MIT light would attest. Four channels for transmit, and 6 for receive—ostensibly to allow for four repeaters but also two simplex options using repeater output frequencies perhaps.

It quickly became apparent this was not a Swan but was in fact a "Swan-a-be" radio!

Upon arrival home from my trip, I posted my find (which I did not actually purchase—just took photos) on QRZ and some friends in the forum did a little sleuthing and found this radio had been listed in a couple other places around the web, and there were more photos available from the various ads that had been run.

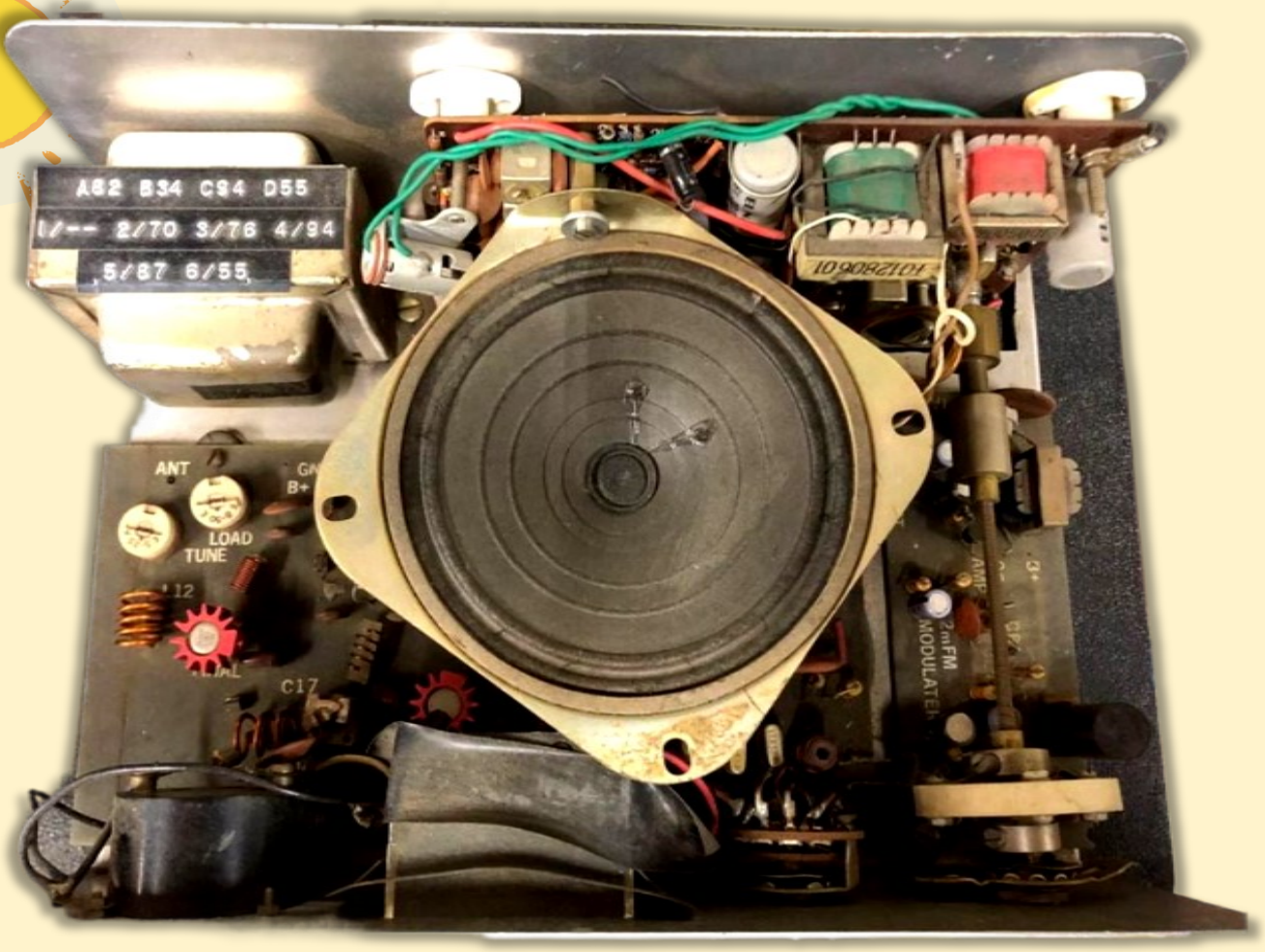
The underside was even more revealing as to the true origin—clearly a homebrew of some sort:



STRAY TOPICS OF INTEREST

MYSTERY RADIO

W7UUU



Looking at the topside, it's actually pretty decent construction overall. However, it really appears to be built from manufactured boards that have been assembled into a single chassis as a system. The board to the right clearly reads "2mFM Modulator" while the large main board under the speaker with a TUNE and LOAD control, plus visible tank coils and power transistors, is assuredly the transmitter board. Two crystals are visible right behind the TRANSMIT selector switch.

The board at the rear I am pretty sure is a preassembled 2m FM receiver and audio amplifier combo board, likely made in Japan in the 1970s judging by the green and red audio transformers, as well as the overall look of the board.

The power transformer labeling very clearly shows common 2m repeater simplex and output frequencies such as 146.76 and 146.94.

While it wasn't for me, and with $50 being probably a wishful-thinking price, it's still a pretty cool old piece. If anyone reading this knows the make of those boards, please shoot a "letter to the editor" at the email address below. ■ *-editor*

STRAY TOPICS OF INTEREST

Fun stuff for Hams to read!

W7UUU

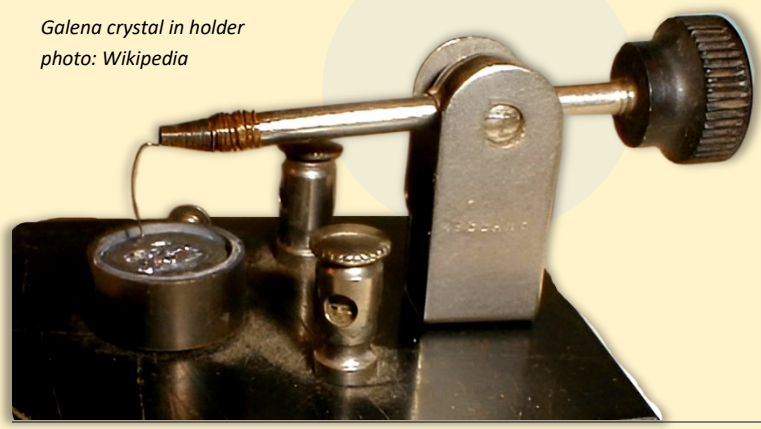
Hidden Word Contest!

Somewhere in this edition of the Logger's Bark is a hidden word. If you are the first to find that word and report it to your Editor, you will win a free QRZ Sticker mailed to you! **This month's word is Galena!** It will be hiding in a sentence—just tell your editor via email what the word is and the page and you will win if you are the first! (***THIS page*** doesn't count!)

Galena was one of the most common of many crystalline minerals which were found early-on in radio to be able to rectify the alternating current of a radio signal. Mounted in a holder that allowed a fine contact wire (called the "cat's whisker"), the surface of the galena metal "slug" would be swept carefully with the cat whisker to find the perfect spot where radio waves could be rectified and fed to a headset. The effect was discovered in 1874 by Karl Ferdinand Braun, and the first patent for a crystal radio wave detector was granted in 1901 to Jagadish Chandra Bose, an early radio experimenter.

Galena detectors such as the one pictured below are still in use by "retro-hobbyists" today in building crystal radios. But in the early 20th century, at the beginning of amateur radio, the galena crystal detector reigned supreme over the earlier much less effective coherer detector (covered in the March Bark, p. 70).

Galena crystal in holder
photo: Wikipedia



QSL Card of the Month

AIR MAIL
To : Brian Crawford
3106-888 Canarvan Street
Vancouver BC V3M ØC6
CANADA
4S7AB on Grid NJ07bd cfm QSOs with W7UUU
Thx QSO & Hope to see you again dear OM
Date UTC Mode RST Band
14 Nov 21 01:29 FT8 -13 20m
SRI LANKA
35.00

This is my QSL card for working Sri Lanka in November 2021 during the peak of the pandemic mess. While not all that rare (right between Angola and Jordan on the "Most Wanted List"), I had never worked a station there before. Alas, he only *uses paper QSL cards—no LoTW or QRZ. But at that time, the US prevented any mail from Sri Lanka entering the US Mail system for fear of Covid contamination of the mailed items. So to circumvent that, I requested my return card be sent to my old friend Brian KL7JDQ who lives in Vancouver, BC and he then passed it on to me!*

Sort of a ham radio version of "QSL laundering" instead of "money laundering" it seems. ■ *-editor*

In Memoriam

Silent Keys & Friends Remembered

In memory of
Bob Hewlett, N7NCP
June 6, 1933—May 24, 2024

With great sadness, we report the loss of long-time club member and friend to all, Bob Hewlett, N7NCP. Following a battle with cancer, Bob passed peacefully while in hospice in Olympia, WA on May 24h.

Born June 28, 1933, Bob joined the navy at 17 and served in Korea. After a 4-year commitment, he moved on to Boeing in 1954 where he worked until 1971. He went on to join Clearwood, a Weyerhaeuser Company project, then on to work on building the Wild Waves amusement park in Federal Way, Washington.

But his favorite career, one he spent 20 years doing from age 48 to his retirement at 68, was backcountry construction projects for the U.S. Forest Service, mostly in Mt. Rainier National Park. Bob could always be counted on to regale members with stories of his adventures around the famous mountain, building park facilities of all types and exploring the miles of long-forgotten mines that wind below the surface.

Bob was first licensed in 1989 as a Technician Plus, a status he held for the rest of his life, and he was very active in the local 2-meter repeater scene in the Pacific Northwest. He was a regular at club activities.
He married his wife Greta, KF7KSW, in June of 1960 and they had three children. For the last few years, Bob and Greta have resided in Ocean Shores, WA.

He will be greatly missed by many. Services will be posted as soon as details are available. Coincidentally, his W7DK Living History video, recorded Fall of 2023, appears on the next page. ■ *-editor*

W7DK LIVING HISTORIES

Member video interviews and profiles

BACK IN 2015, when I was helping to organize the W7DK Centennial Banquet and Celebration, I asked about possibly recording video interviews of club members for future generations to learn more about those that came before them. However, that plan like so many things in life, sort of slipped by the wayside and I truly regret not revisiting such a project much sooner.

The fairly recent loss of our most senior member, Worth Gurley, W7WG, a true friend to all who knew him and to strangers alike, reminded me of the extreme importance of capturing aspects of our members lives and involvements not in only ham radio, but also with the Radio Club of Tacoma.

So I've finally got that "round TUIT" that I should have found sooner and have embarked on recording what I am calling the W7DK Living Histories Project. For this effort I video a short (15-20 minute) interview with our members in a free-form format to allow them to share some insights into how they came to amateur radio, and how they became involved with the Radio Club of Tacoma.

So far I have produced a small number of these videos but it's an ongoing process, and I hope to continue until all members who wish to participate have had a chance to do so.

One of the challenges of any such project is where to store the data that is the encoding result of all the video that is produced and edited. If stored on a local computer such as at home it is subject to the failures we all know can happen: fire, electronic failure, physical loss (where did I put that hard drive?) or other calamities. Storing at the clubhouse doesn't fare any better in the long run.

Click picture to watch the video

So the videos are being uploaded to YouTube, where they have a strong chance of remaining there for a great many years to come. Several are already uploaded, with several more in editing and more on top of that slated to shoot.

I hope to record such histories of ALL members who wish to tell their stores—please contact me if you would like to participate.

Please enjoy this series of videos, with a new link every month. Click the image to watch the video.

-Dave W7UUU

Well, ***since I'm not getting any submissions for this section***, "I use what I have". This was my very first shack, in March of 1975. I passed my Novice in December '74 at 13 years old, then built my own first radio: the Heathkit HW-7 QRP transceiver you see in this photo. My ticket arrived in early March 1975 (2.5 months it took!) and I had my very first CW QSOs with this radio with Nick Winter, WA7IVO (now K7MO) and his dad, Joe WA7RWK (SK). The radio to the right was a cheesy Montgomery Wards channel 14 "toy CB" that I used to talk to a kid across the street (not a ham). The Radio Shack intercom box on top I wired to the kitchen downstairs, so Mom could call me to dinner. The calculator was *very* special—I paid for it myself, with $74 of yardwork money—it was a Remington-Rand and believe it or not, I still have it. Oh, and how about that wallpaper?! Mom *loved* her wallpaper… so I had to endure that in my own bedroom for several years. *-Dave W7UUU* Galena

Send in YOUR shack! *PLEASE!*

email loggersbark@gmail.com

TNT THE NEW HOT THING

Hot and new products to think about

W7UUU

WHILE NOT STRICTLY new so much, the Kenwood TH-D75A HT is certainly new enough on the scene that it's still being reviewed and discussed despite coming out last summer. So what is it ? It's what Kenwood is calling the "Next phase" in the evolution of the HT by offering simultaneous reception of 2 D-STAR signals, plus Reflector Terminal Mode, and an APRS standalone digipeater as well as GPS built in. It also offers Bluetooth headset with PTT support and USB-C for charging as well as for serial port connection and audio output. Nice touches, both of those.

One of the really cool features is that it's a tri-band HT and actually includes 220 MHz, which is very unusual in modern VHF/UHF radios. This is due mostly to that band only being available to hams in Region 2 (the Americas) and not Regions 1 and 3. This means the Japanese as well as European markets are excluded. So it makes the TH-D75A something of a "U.S. market-aimed" radio for that reason.

Another cool new feature is Enhanced Voice Guidance—with upgrades over the previous model that include variable volume, variable speed, VOL-linkage, and more than 770 available phrases. It also offers support for call sign reading with phonetic codes. Receiver IF filters are also greatly improved over previous models, to better attenuate nearby signals during SSB or CW operation. Yes, you read that correctly: in wideband mode, reception covers from 0.1 to 524 MHz and includes reception of LSB, USB, CW and AM mode signals! (It only transmits FM … sorry!). It even offers CW decoding (although, as most CW ops will tell you, only near-perfect CW with great signal-to-noise ratio signals will decode properly).

One *glaring* feature that's missing in the opinion of many is it is not full-duplex in operation, which can be a limiting factor for some users.

Another cool feature for more advanced users is an IF output via the USB port, that offers 15 KHz of bandwidth that can be used with a third-party PC application to view nearby frequencies. No, it's not exactly like an IC-7610 "fish finder" waterfall display by any means, but could prove useful for many operators.

The radio itself provides a 1.74 inch TFT color LCD that works well in sunlight, but does not offer the band scope feature. That's external only.

The learning curve on a radio like this is likely to be *pretty steep*… but you can start reading now by clicking here to read the full operation manual.

Current street price on DX Engineering and other vendors is $749.95, down about $50 since it was first announced. ■ *-editor*

Click to visit the Manufacturer's Site

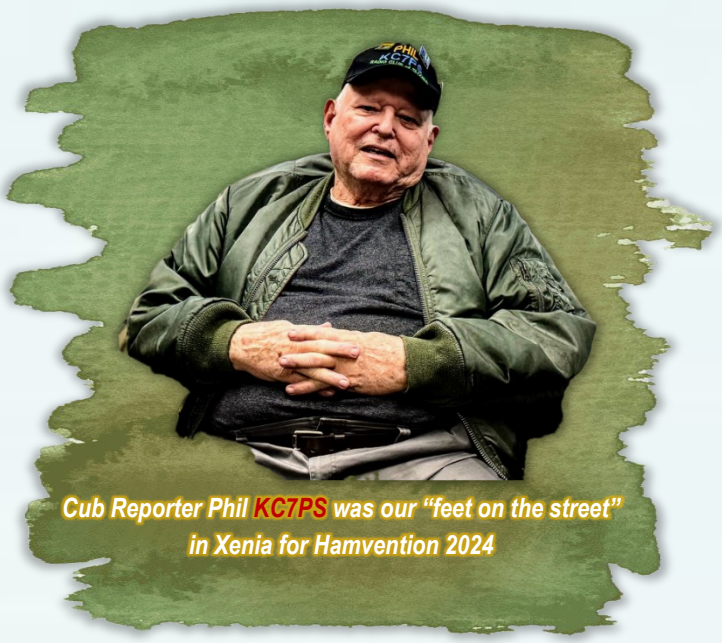
W7DK 'Feet on the Street' Report from

Dayton Hamvention®

Sponsored by Dayton Amateur Radio Association

ON A SUNNY MAY 9th, *club member Phil KC7PS took off from his QTH in University Place (West Tacoma area) heading cross-country to attend the Xenia (Dayton) Hamvention 2024. The plan was to spend three days at the show, then carry on for an extended journey around the U.S. to visit family members.*

But as we will see in Phil's report, things didn't entirely go as planned. What follows is his account of arriving at Hamvention, and the photos he was able to take before being forced to leave due to unforeseen circumstances. -Dave W7UUU, editor



Cub Reporter Phil KC7PS was our "feet on the street" in Xenia for Hamvention 2024

"**Friday May 17:** So much for a good start to Hamvention 2024. Rain and mud. I arrived at the fairgrounds just after 7:00 AM to find that there were already many folks that were ahead of me. I got parked in an ADA lot that was close enough that I didn't have to walk very far to get to the entrance, only to find that the gates didn't open until 9:00 AM.

So back to the car and wait it out till around 8:45 to go rent my electric mobility scooter. I waited in line until 9:20 to get that, and then again in line to get in the gate. So while still in the rain, I tried to find my way around the buildings and get my bearings. I had scheduled to attend four forums for today, but with all the rain and confusion finding my way around, I only made three of the four.

The first pic (next page) is of Mike Ritz, W7VO, Second Vice President, moderating the forum on the ARRL Clean Signal Initiative (CSI). This was presented by Mike, as well as George Spatta W1GKS, ARRL Lab Manager, and Rob Sherwood, NC0B, Sherwood Engineering Inc. This proved to be a very good explanation of the ARRL CSI initiative to improve amateur radio transmissions. While this is still a work in progress there are some good signs that sound good for the future of not just the U.S., but for all amateurs worldwide.

The next forum I attended had to do with the ramifications of how and why to implement grounding. Our ARRL First Vice President, Kristen McIntyre, K6WX, was the speaker for this one. She made a good point that lightning was probably the one thing we just didn't want coming into the shack! Grounding everything else might keep down unwanted noise, but the use of clamp-on toroid beads was probably well warranted, along with using ground-plane wiring in addition. While she has given this talk many time before, I found it to be trying to

W7DK 'Feet on the Street' Report from

Dayton Hamvention®

Sponsored by Dayton Amateur Radio Association

make too many points for good understanding. Just my personal opinion.

The last forum was, *I thought*, to be led by our ARRL CEO, David Minster, NA2AA. Oddly, the topic was "Gaming the Amateur Radio Modes". Not what I was expecting. David did not show up and the young man that led the talk explained it was about a "poker game that has it's roots in FT8". I didn't understand just how it is played, I guess because I have no interest in such a game. I am not a game player. PERIOD. [*Note: the absence of the CEO was due to a major IT issue back at HQ that required his immediate attention –editor*]

I did get a chance to have a short conversation with Mike Ritz W7VO and the ARRL president, Rick Roderick, K5UR. And guess what: Rick did say that he has read the W7DK Logger's Bark!

Looking forward to see what tomorrow brings. Better weather we hope.

Saturday, May 18th: Well W7DK Bark readers, I *really did it up* today. I had just got on my electric scooter and was headed for the entry gate when I tried to go from grass to pavement and managed to dump the scooter and me with it into the muddy grass, and my left knee took all the hurt it could stand. I managed to make a few hours of the Hamvention, but at about 1:00 PM, I decided to cash it in and headed for the exit.

I had to get some help to get into the car and then to the hospital emergency room to see how much damage I had done. I did manage to send off the last batch of pictures before I left. The last few are just crowd pics but the others are of the forum put on by ARRL with President Rick leading it off and challenging us to talk up Ham Radio and work to increase the ARRL membership, etc. Same points he made for the past several years.

I'm sure that there will be an article in QST about the convention. And please tell Steve Dightman AF7YD that I did manage to get his message to the CEO thru ARRL President Rick K5UR.

End of report—now on to the rest of my journey across the country seeing family.

My best of 73 to all,

-Phil KC7PS, W7DK "Roving Cub Reporter"

2nd VP Mike Ritz W7VO, standing, presents his Clean Signal Initiative program to the attendees of Hamvention 2024

W7DK 'Feet on the Street' Report from

Dayton Hamvention®

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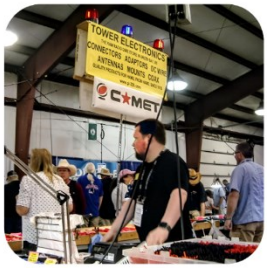
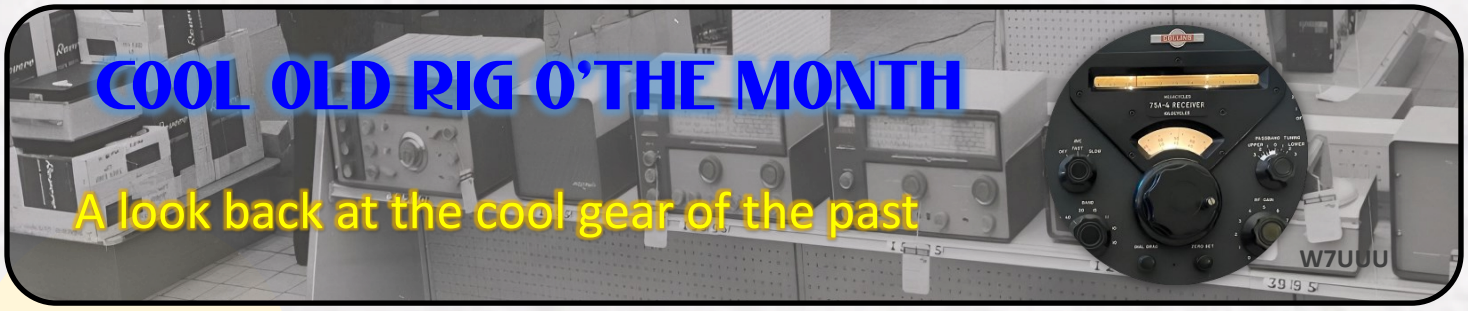


A few of Phil KC7PS's snapshots from Xenia Hamvention 2024

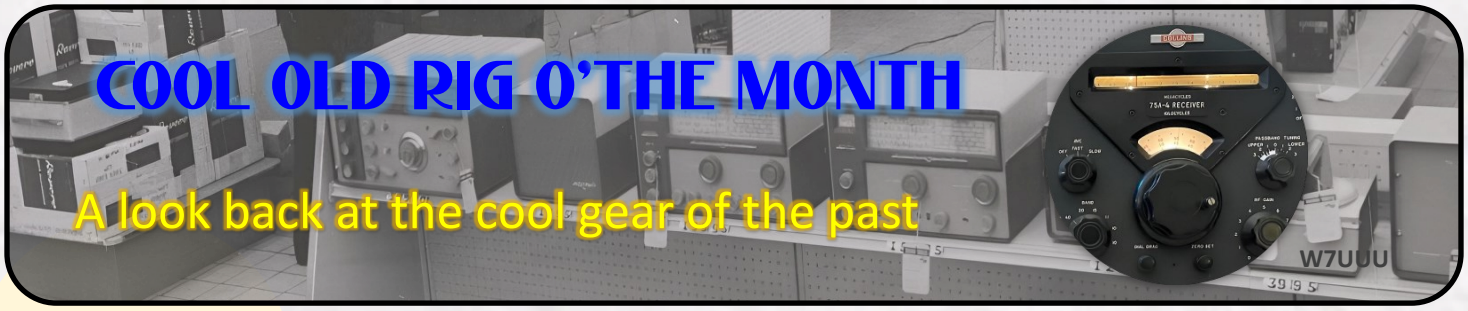


COOL OLD RIG O'THE MONTH

A look back at the cool gear of the past

MOST HAMS TODAY likely don't think too much about their transmitter power output level. If you were to plot the Bell Curve of ham radio HF transmitter power levels for general use, it would be a very steep curve with 100 watts centered at the top. This is simply because the vast majority of ham HF transceivers these days have a 100-watt output. But on the left of that curve you will find the QRP crowd –those who enjoy running 5 watts or less output (10 watts SSB). While the beginnings of QRP, or "low power" operating are somewhat vague, the real explosion in interest in such operations really began in the late 1960s and expanded heavily into the 70s and beyond, to this day. However, rig choices were slim if you weren't into homebrew. Sure, many transceivers could then (as well as today) be dialed back in power to whatever level was desired. But there were very few quality commercial QRP products on the market. One of the "Hams at Heath", engineer Bob Furnau, W8NDG (SK) himself was interested in QRP and knew there was a growing interest in the ranks of amateurs. Part of the culture at Heathkit was experimentation, so Bob embarked on designing what would become Heathkit's first QRP product, and what would turn into a mega-seller radio in the QRP world. Bob put together a breadboard prototype design for just 15-meters during his lunchbreaks at the Benton Harbor factory. Once it was proven to be a workable design, he took it to management. The design was approved, and expanded to cover 20 and 40 meter bands as well. Thus was born the Heathkit HW-7 QRP transceiver. While it was a workable design, it was not without significant issues. Most notably, it was horribly microphonic, meaning mechanical vibrations were coupled into the receiver audio. The slightest tap or thump on the desk would ring in the operator's ears. This was a biproduct of being a direct-conversion receiver, in which the CW signals could be heard on *both* sides of zero-beat. If users weren't careful to tune from the high side down when finding a station to call, they would never be heard due to calling "on the wrong side of the signal". The preselector was ridiculously touchy and difficult to set, the CW sidetone was horrid, the dial had backlash in the vernier mechanism, and power output was pretty dismal—typically 1 to 2 watts output on all bands. But despite all these shortcomings, the HW-7 was a smashing success for Heathkit, and within 6 months a successor was already in the works (HW-8, which we'll cover in a future issue). *(continued)*

Photo by Dave W7UUU

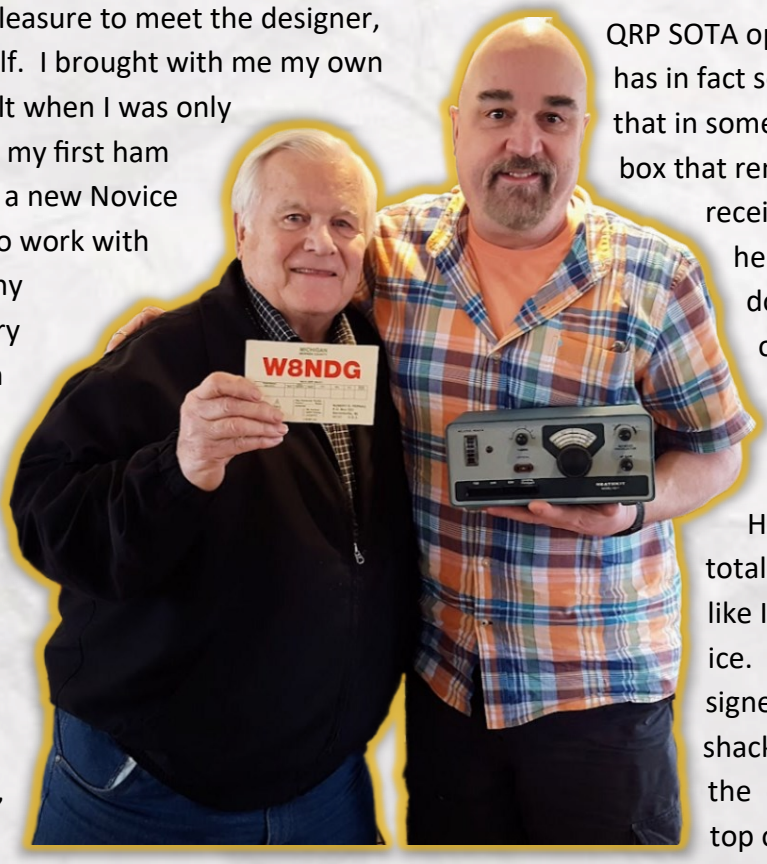


COOL OLD RIG O'THE MONTH

A look back at the cool gear of the past

A few years ago, I spent some time researching the old Heathkit factory locations in Benton Harbor, and had the great pleasure to meet the designer, Bob W8NDG, himself. I brought with me my own HW-7 that I had built when I was only 13 years old. It was my first ham radio transceiver as a new Novice but it's what I had to work with and I didn't know any better. I had my very first QSOs on March 17, 1975 with Nick Winter, K7MO (WA7IVO then) and his father, Joe, WA7RWK.

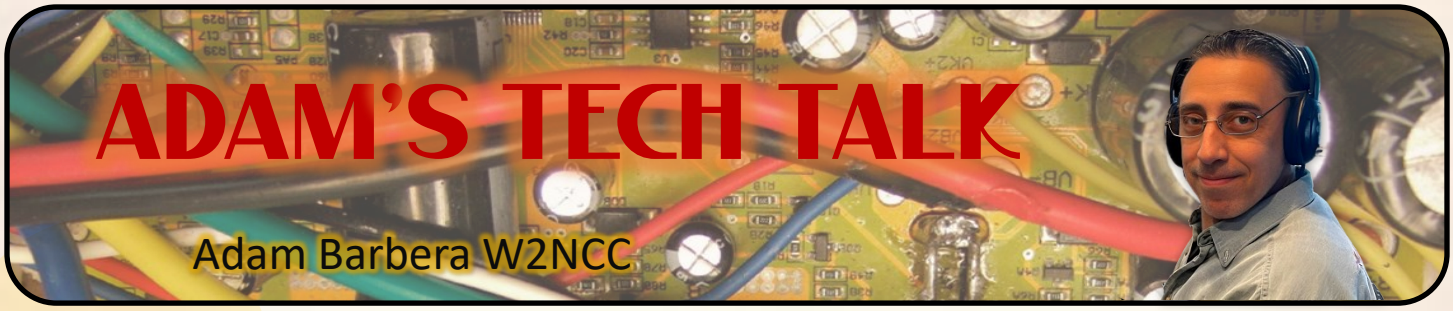
So it was an honor to meet the man who had created this neat little radio, and I just had to bring it with me. We met at a local restaurant near Benton Harbor, and Bob happily autographed my HW-7. It was a truly exciting moment for both of us… I learned after his passing that he told his son that it was the one time in his life that he felt like a rock star, signing autographs for one of his fans.



Bob W8NDG (SK) with author Dave W7UUU

Today there are probably more published modifications and improvements for the HW-7 / HW-8 QRP transceivers than any other rig in the history of the hobby. There are literally hundreds of tweaks and mods that have been proposed over the years, most of which work really well.

W7DK's former Museum Curator and avid QRP SOTA operator Rich Patrick, KR7W, has in fact so heavily modified his HW-7 that in some ways, it's mostly just the box that remains! The original HW-7 receiver was so inadequate that he redesigned it entirely, abandoning the original circuitry outright. He also made substantial improvements to the transmitter. But over the years, I still pull down a HW-7 from the shelf that's totally stock, and put it on the air like I did in my first year as a Novice. Alas, the one I built that Bob signed was destroyed in my 2020 shack fire, but I was able to save the cover which now graces the top of a different HW-7 that I have in my shack today. ■ *-editor*



RIG IN A BOX—Revolutionizing DXpeditions!

Hello everyone and welcome to this month's column! As we all know, the world of ham radio has been transformed in recent decades by the advent of modern transceivers, internet connectivity, and remote access technologies. These advancements have enabled ham radio operators to control their stations from virtually anywhere, opening up new possibilities for contesting, DXpeditions, and experimentation without the need for physical presence at the transmitter.

Mike KN4EEI (left) and George AA7JV deploying a RIB

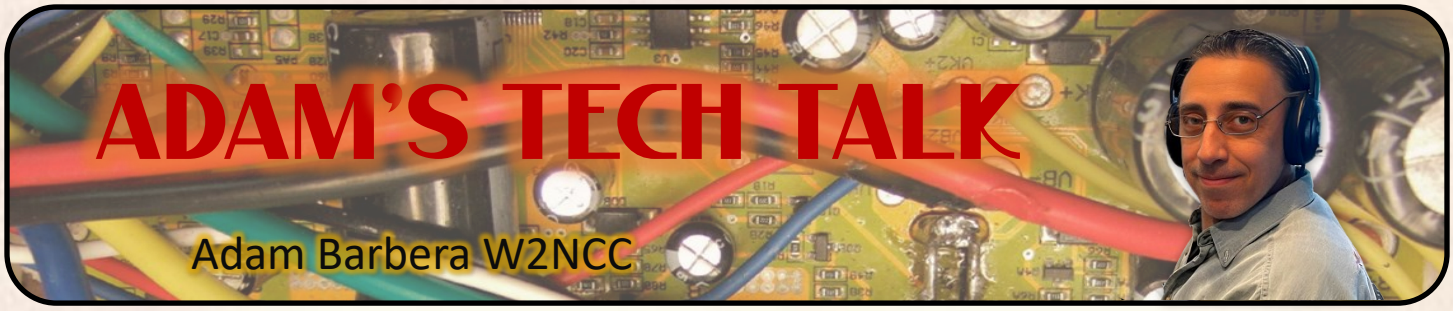
One of the most significant developments in this field is the Rig In a Box (RIB) technology. Created by George Wallner, AA7JV, and funded by the Northern California DX Foundation, RIB is a self-contained station designed to allow DXpeditioners to activate rare entities without actually camping onsite. This technology represents a significant leap forward in DXpedition technology, enabling the activation of rare entities with minimal environmental impact and all the associated logistical challenges usually associated with such activations.

The RIB is a complete station housed in a weather-tight box that includes an SDR transceiver, an amplifier, power supplies, and a control system. The aim of this technology is to streamline DXpedition setups, reduce costs, and allow remote operators to participate without physically traveling to the location.

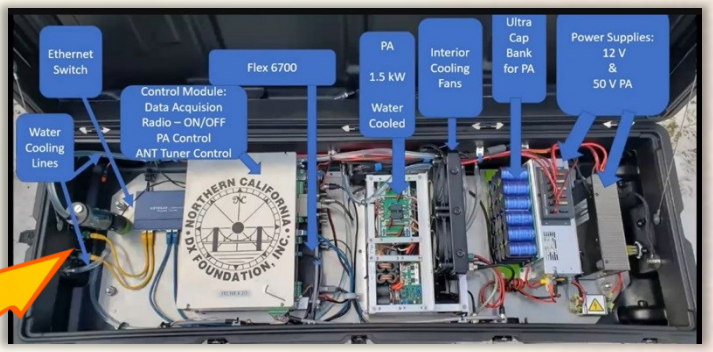
A testament to the effectiveness of the RIB technology was the Tikehau Atoll DXpedition conducted by George AA7JV in French Polynesia. This groundbreaking experiment took place from March 28 to April 10, 2023. The operators deployed two RIBs on the atoll and completed over 11,000 FT8 QSOs remotely with the help of operators who worked from their homes in shifts. The RIB stations were connected to the Internet via a Starlink satellite connection and operated in FT8 and FT8 F/H modes using SDR radios. The stations were powered by Honda EU2100 generators and were unattended on the island but remotely supervised from the anchored ship.

The remote DXpedition setup offers several advantages, including reduced costs compared to traditional expeditions involving transporting equipment and personnel to remote locations. With advancements in technology enabling seamless remote operation over high-speed Internet connections, the concept is viable. The potential for extended durations of operation, continuous monitoring, and global participation by remote operators presents exciting possibilities for the future of DXpeditions.

The RIB concept was born out of the need to simplify and streamline DXpeditions to environmentally protected entities like Baker Island, KH1/KH7Z. These locations are often challenging to access due to strict permitting requirements and environmental concerns. The core idea behind RIB is to house an entire amateur radio station within a self-contained box that can be deployed on the island while operators remain on a nearby boat. By utilizing a microwave-based IP link, operators can control

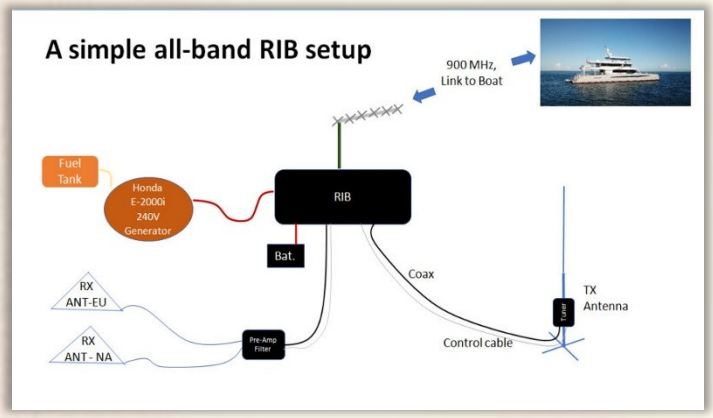


Showing the insides of the Rig In Box (RIB)


Ethernet Switch
Flex 6700
Control Module: Data Acquision Radio – ON/OFF PA Control ANT Tuner Control
Water Cooling Lines
PA 1.5 kW Water Cooled
Interior Cooling Fans
Ultra Cap Bank for PA
Power Supplies: 12 V & 50 V PA
NORTHERN CALIFORNIA DX FOUNDATION, INC.

Layout of the components inside the RIB

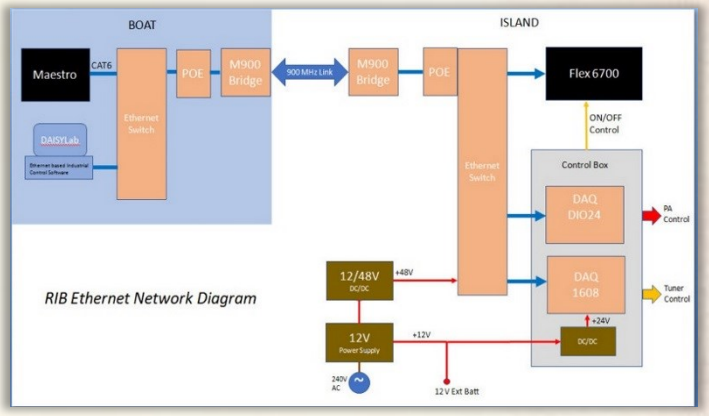
the station remotely from the boat, eliminating the need for setting up camp on the island and reducing logistical complexities. The RIB system typically includes all essential components of an amateur radio station, such as



Physical layout of RIB vs. the monitoring ship offshore

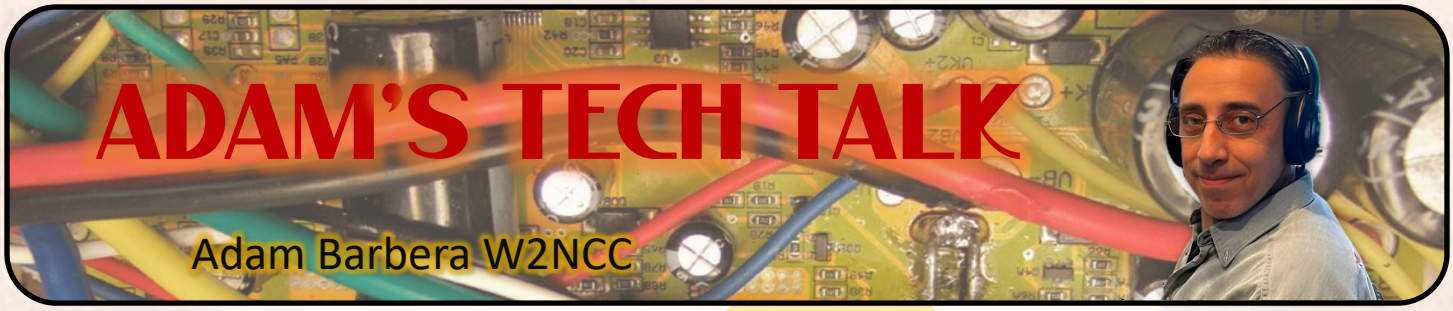
transceivers, antennas, power supplies, and necessary accessories, housed within a ruggedized box designed for outdoor deployment. The RIB has two internal cooling systems. The 1.5-kilowatt Power Amplifier (PA) is water cooled directly and has its own heat exchanger, cooling pump and radiator. The interior of the box has another cooling system and that's to cool everything in the box. Operators can remotely control the station using advanced communication technologies like IP links, enabling them to make contacts from a distance without physically being present on the island. This innovative approach not only simplifies setup but also maximizes operating time by minimizing logistical hurdles.

Ham radio remote access technologies enable DXpedition



RIB Ethernet logical layout and flow

teams to operate from remote locations. Hostile locations like Bouvet Island, where traditional setups may not be feasible due to various constraints like geographical challenges, regulatory restrictions, or safety concerns, are applications where RIB technology can make many



otherwise impossible DXpeditions possible. By using Internet-connected radios with custom web interfaces, operators can remotely control HF stations, allowing for greater accessibility and flexibility in conducting DXpeditions.

This approach reduces the logistical requirements associated with traditional DXpeditions that involve transporting personnel, equipment, and supplies to remote areas. Remote access technologies offer a more cost-effective and sustainable approach to conducting amateur radio operations.

In conclusion, Rig In a Box (RIB) represents a revolutionary approach to conducting DXpeditions to rare and environmentally sensitive locations. By leveraging advanced technologies and innovative thinking, amateur radio operators can activate elusive entities while minimizing their footprint on fragile ecosystems. In essence, this technology is set to enable more regular DXpeditions to challenging locations, potentially extending the on-air duration for station operators.

The development of RIB underscores the continuous evolution of ham radio technology and highlights the dedication of hams worldwide to pushing boundaries and exploring new frontiers in amateur radio communication. This is a testament to the spirit of innovation that drives the ham radio community, constantly pushing the boundaries of what is possible and opening up new frontiers for exploration and discovery.

Until next month, 73 from Adam W2NCC

All photos and graphics ©NCDXC.org

*The **NCDXC** was formed in 1946 and has over 200 members from all over Northern California, with most of the members residing in the 9 Bay Area counties. The NCDXC holds monthly meetings, maintains a repeater high above Silicon Valley, and provides an active on-line CHAT reflector. NCDXC member's interest in DX is varied. Some members enjoy chasing entities for DXCC, five-band DXCC, IOTA, Grid Squares, five-band worked all zones while others chase DX on 6 meters and EME.*

Members chase DX on HF, VHF, SSB, CW and digital modes. NCDXC members work DX from their mobile stations while others build elaborate stations with multiple towers. Most of us have stations on city lots with wires and small triband yagis. Some members like to participate in DX contests, while others like to visit countries to operate from the DX end of the pile-up.

If you are beginning the chase for DX entities, NCDXC members will be happy to provide help to reach your next DX goal. The Northern California DX Club offers members the opportunity to bring their DX QSL cards to a meeting so the club can forward member's cards to the outgoing ARRL QSL bureau. We also have several members who provide Card checking for both ARRL and CQ awards. The NCDXC holds an annual summer picnic and a Christmas holiday luncheon. Every other year, the NCDXC is the host for the annual International DX Convention (IDXC) which draws DX'ers from all over the world.

We also operate the W6TI repeater, pictured on the left. This repeater has a very high coverage area and used by nets as well as DX spotting, which is highly encouraged! You can find more information on this repeater on its dedicated repeater page linked above or by clicking here.

All DX'ers (NCDXC members or not) are welcome to join our reflector. To join the "CHAT" reflector, click on the MAILING LIST in the RESOURCES on the menu for more information.

New and visiting DX'ers are always welcome to attend our meetings. Meeting details are found clicking on the "MEETINGS" button on top. We welcome anyone who is interested in working DX. Full membership in the NCDXC is open to any DX'er living in the Northern California area. Joining the Northern California DX Club is easy. Simply fill out an application, and bring it to the next meeting. We don't require a minimum number of countries worked or confirmed to join; all we ask is that you demonstrate an interest in DX. Whatever your DX interest is, review our web site. Please consider joining our organization and/or making a donation 73 - NCDXC B.O.D.

ANTENNA TIME

Notes, tips and projects

By W7UUU

ARGUABLY ONE OF THE MOST *maligned*, but at the same time *most popular*, HF antennas in amateur radio is the world-famous **G5RV**, so-named for its creator, Louis Varney G5RV (SK).

In many respects, it looks just like a typical ladder-line fed doublet, with a flat-top or inverted vee section that is 102' long, the balanced-line (300-450 Ohm) feeder is usually ~34' long where the impedance will conveniently match a 50-Ohm or 75-Ohm coax of any length back to the shack.

Varney created the design to be optimized for the 20m ham band, where the flat-top at 102 feet forms a 3 half-wave-long center-fed antenna. In Varney's own words, it is an antenna "which produces a multilobe polar pattern with most of its radiated energy in the vertical plane at an angle of about 14 degrees, which is effective for working DX". A G5RV of the standard dimensions is therefore optimized for the 20-meter band, usually without the need for a matching network (tuner). 20m is the only band where the G5RV *really shines* and can be used *very* effectively.

But what Varney found is that the antenna he designed can work *pretty* well on other bands. He found that on **80m (3.5 MHz)** it could be used as a compromise "folded dipole" but in practice, not very practical to use due to an "unavoidable reactance between the electrical center of the dipole and the feeder to the matching network", to quote Varney. A pretty robust matching network is required to make 80m be viable for most users. It can be made to work as long as the antenna matching system has sufficient range.

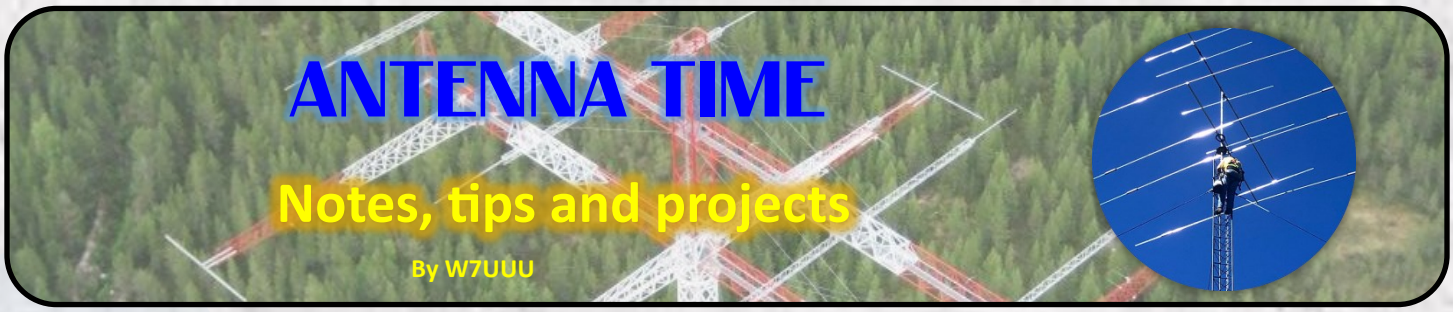
On **40-meters (7 MHz)**, things improve: with an appropriate matching network (tuner) "the system loads well and radiates very effectively", quoting Varney.

Portrait of Louis Varney, G5RV, commissioned by artist Ken Farmer and unveiled by Nelida Varney on November 9th 2001. Today it hangs at the Mid Sussex Amateur Radio Society.

On the **30m band (10 MHz),** according to Varney, "the antenna functions as a two half-wave in-phase collinear array, producing a polar diagram virtually the same as on 7 MHz." But in actual practice, the G5RV simply refuses to work well on this band. Not recommended but give it a try…

20-meters (14 MHz) as mentioned, the antenna actually *shines* as long as mounted at least 34 feet so the ladder-line matching section hangs vertically perpendicular to the antenna. For this band, the G5RV generally performs *very* well, with an SWR of around 1.8:1 when using 50-Ohm coax for the feeder.

17-Meters (18 MHz) is also a strong "no go" for the same reasons as 30m. Varney claimed, "the antenna



functions as two full-wave antennas fed in phase" but as with 30m, in practice it's not a useful antenna on this band and is very difficult to find a match.

15-meters (21 MHz) fares better: per Varney, "on this band the antenna works as a long-wire of five half-waves, producing a multilobe polar pattern with effective low angle radiation" but the "lobe-y-ness" causes deep nulls in many directions.

Same story for the **12-meter (24 MHz)** band, where Varney says, "the antenna again functions effectively as a 5 half-wave long wire". In practice, it will match reasonably well with a good tuner but is very "lobey" as well so not stellar—but it *does* work.

10-meters (28 MHz), despite Varney's claim stating, "the antenna functions as two long-wire antennas, each of three half-waves fed in phase" the reality is it just won't work. For most hams, it will be virtually impossible to find a good match.

So what does all of this mean? It means that the G5RV antenna is *better than no antenna at all* by a big margin. With a decent tuner (i.e., manual or externa autotuner) it can be matched with a reasonable SWR on 80, 40, 20 (especially!), 15 and 12 meters.

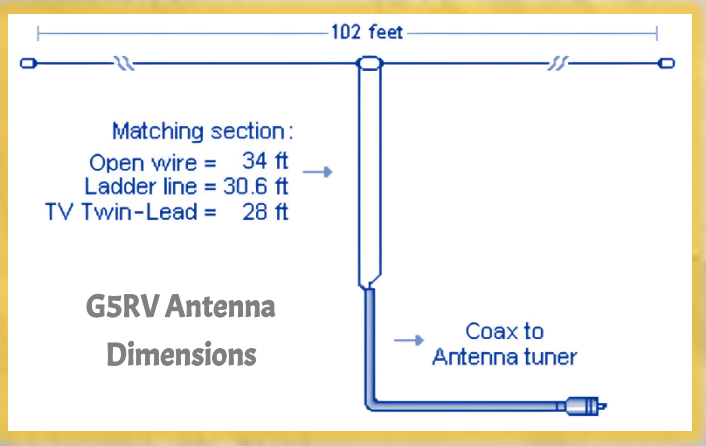
I used a G5RV for two years back around 2012, configured as an inverted vee, with the apex up about 40 feet. It actually worked very well, all things considered and I worked my share of DX, especially on 20 meters (the original design band for the antenna). I made do with the significant compromises for the other bands, but considering I had few options to put up additional antennas, I felt it was a solid performer given my limitations.

But the amateur community has really given the lowly G5RV a very tawdry reputation, that I personally feel is undeserved. A few years ago, during a time the G5RV was still in the tree but I had a Mosley TA-33 tri-band Yagi on the roof tower, I would start a 20m SSB contact on the G5RV but not mention the antenna. I'd get, say, a solid 59+ report. I would tell the other station I was on the Beam antenna. But then I'd say I was going to switch to the G5RV… and BAM! They would come back with "Oh you dropped down a lot when you switched… go back to the Yagi" when in fact I had changed nothing. There's a lot of unfounded "G5RV hate" out there, so if you put one up and get it well adjusted, just tell folks your antenna is a *doublet* and then no one has to know!

But you *can't escape* the need for a good tuner to use with a G5RV on bands other than 20-meters! The built-in tuner of most modern transceivers just can't cope with the extremes of the other bands, where the mismatch can be up to 10:1 on some bands.

At the end of the day, if the G5RV is all you can muster, I say "go for it" - it beats "nothing" *any* day!

-Dave W7UUU



Understanding the Importance of Solder Fume Extraction in Electronics Workshops

By John William

In the world of electronics, soldering is a fundamental process. Whether you're a hobbyist or a professional, creating precise connections between components is crucial for the functionality and longevity of electronic devices. However, what many people overlook is the potential health hazard associated with soldering — solder fumes. In this guide, we will delve into the importance of solder fume extraction in electronics workshops and why it should be a top priority for anyone engaged in soldering activities.

The Hazards of Solder Fumes:

Solder fumes are a byproduct of the soldering process and consist of tiny airborne particles and gases released when solder, typically a mixture of tin and lead, is melted. These fumes may seem inconsequential, but they can pose serious health risks when inhaled over time. Here are some of the potential hazards:

- *Respiratory Problems:* Solder fumes contain harmful substances like lead, flux core chemicals, and metal particulates. Prolonged exposure can lead to respiratory issues, including lung irritation, bronchitis, and asthma.
- *Lead Poisoning*: Traditional solder contains lead, a highly toxic substance. Inhalation of lead fumes or ingestion through contaminated hands can result in lead poisoning, which can lead to a range of health problems, especially in children and pregnant women.
- *Eye and Skin Irritation*: Solder fumes can irritate the eyes, causing redness, watering, and discomfort. Skin contact with solder and flux can also lead to dermatitis and rashes.
- *Long-Term Health Effects*: Chronic exposure to solder fumes has been linked to more severe health problems, including neurological issues, reproductive problems, and increased cancer risk.

The Role of Solder Fume Extraction:

Solder fume extraction is the solution to mitigate these risks and create a safe working environment. Here's why it's crucial:

- *Protects Your Health*: A well-designed solder fume extraction system captures and removes harmful fumes at the source, preventing their inhalation. This significantly reduces the risk of respiratory and other health problems.
- Compliance with Regulations: In many regions, there are strict regulations governing workplace safety, especially when it comes to hazardous substances like lead. Employing a solder fume extraction system ensures compliance with these regulations, avoiding potential legal issues.
- *Enhances Work Efficiency:* A clean and safe workspace is essential for concentration and productivity. Eliminating fumes and the distractions they cause can improve your soldering quality and efficiency.

- *Extended Equipment Lifespan:* Solder fumes not only harm your health but can also corrode electronic components and equipment. A fume extraction system helps protect your tools and ensures their longevity.

Choosing the Right Solder Fume Extraction System:

Now that we understand the importance of solder fume extraction, it's essential to choose the right system for your needs:

- *Local Exhaust Ventilation:* This system captures fumes directly at the soldering point. It's highly effective and suitable for smaller workstations.
- *Filtered Cabinets:* These enclosed cabinets with built-in extraction are ideal for larger-scale operations, providing both protection and visibility.
- *Fume Extractor Fans:* Portable extractor fans are suitable for occasional soldering tasks, offering flexibility and ease of use.

Conclusion:

In conclusion, solder fume extraction is not a luxury but a *necessity* in electronics workshops. It safeguards your health, ensures compliance with regulations, and promotes a productive and efficient workspace. Whether you're a hobbyist or a professional, investing in a reliable solder fume extraction system should be a top priority to create a safer and healthier soldering environment for yourself and those around you. Don't compromise on safety; take action today to protect your well-being and the longevity of your equipment.

-John William, Medium.com ©2023

THIS IS THE SOLDER absorber / fume extractor I use on my own workbench. It's not large—5x5 inches on the "business end" face of the box, and 3 inches deep. So it's not by any estimation designed for high-volume use and certainly not commercial applications.

But if you're like me, and need a simple compact solution to help draw the solder smoke fumes from where you're working on your bench, this is a perfectly fine option.

In practical use, I find it rather pleasant, after all these years of working on an electronics bench, to not smell solder smoke so much every time when I work on stuff. Granted, the smoke is simply pulled through the device (and its internal filter screen) and "out the back" so it's not removing the solder smoke from the room—by any means! So don't take that away.

But I feel after a couple years in use, that it's doing a fine job for what it is and certainly an improvement of the way I'd been doing it for all those years before.

-Dave W7UUU

Every ham service shop needs this!

$205

Cool Tool

SO SPEAKING OF soldering and soldering tools, there's no better way to desolder components than an actual profession desoldering tool.

The Hakko FR-300 or FR-301, while a bit pricy, is indispensable when doing repair work vs. solder braid, simple solder suckers, or other means of removing solder to replace components.

There are endless jokes about "vacuum solder removing" tools—"this thing really sucks". But the truth is, such a tool that heats the solder to a melting point, then applies a very strong and consistent vacuum action, works wonders to remove solder from PC boards during the repair process of replacing components.

The Hakko units have a really good feel, with an adjustable temperature control for lowering the heat for more delicate situations.

Not a whole lot of maintenance—just a cleaning of solder jettisoned after each use and, if purchased new, cleaning tools are included.

Cheap? No. Worth it? ABSOLUTELY.

-Dave W7UUU

Upcoming Ham Fests in the area

June [TBD] Port Ludlow ARC Tail Gate Swapmeet. https://www.n7pl.org/swapmeet23.html

June 7, 8, & 9. Wenatchee Apple City ARC Hamfest, Dryden, WA. ***This is an ARRL Sanctioned Event.*** https://www.applecityarc.com/ Flyer in PDF. (290 K) Map

June 8. Inland Empire VHF Radio Amateurs Swap meet. Plante's Ferry Sports Complex, 12320 Up river Drive, Spokane, WA. Back Parking Lot. Flyer in PDF (1.3 MB)

July 19-21. Glacier Waterton International Peace Park Hamfest. Glacier Meadows Campground, 13 miles west of East Glacier on MT Hwy 2. ***This is an ARRL Sanctioned Event.*** http://www.gwhamfest.org/

July 20. Chehalis Valley ARC Ham Radio Tailgate Swapmeet. ***This is an ARRL Sanctioned Event.*** http://www.cvars.org/

Listings courtesy: Lynn Burlingame www.N7CFO.com

Got a cool shop tip? Send it in!

HAM TECH 101

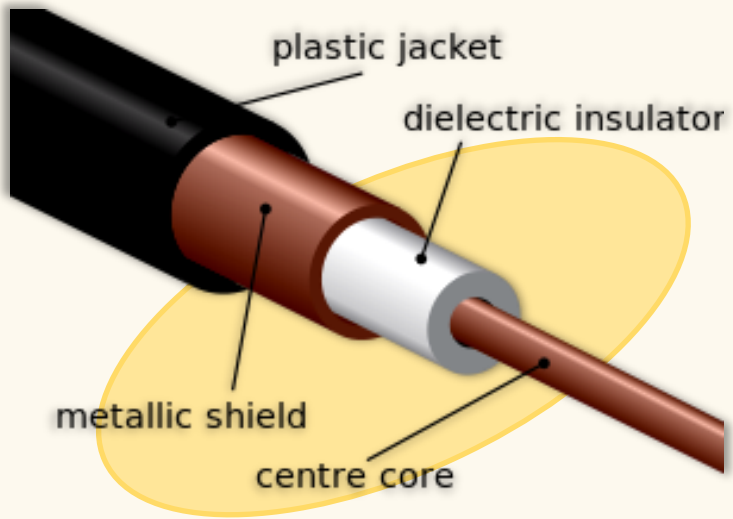
Useful tech info for newer hams and old

BECAUSE IT'S COMMONLY used in radio work, every ham should be familiar with coaxial cable, often simply called coax.

Coaxial cable is most often used between the transceiver (or T/R switch) and antenna. In this application coax acts as the feed line (AKA transmission line) to carry transmitted and received RF signals between the antenna and radio. Other types of feed line can be employed but coax is used by many hams because it is easy to work with and readily available.

T9B03-2018: Why is coaxial cable the most common feed line selected for amateur radio antenna systems?
It is easy to use and requires few special installation considerations

Coax is a type of electrical cable that has an inner conductor surrounded by a tubular insulating layer, surrounded by a tubular conducting shield. Most coaxial cables also have an insulating outer sheath or jacket. The term coaxial comes from the inner conductor and the outer shield sharing a geometric axis.



To be useful coaxial cable must be terminated with mating RF connectors. An experienced ham may terminate their own coax; at greater cost they may purchase ready-made and tested assemblies.

A wide variety of coaxial cable and assemblies are available with different characteristics. A quick summary of the important features:

- Characteristic impedance
- Signal loss
- Power capacity
- Diameter/weight
- Flexibility
- Environmental resistance

A seventh important characteristic of coax is velocity factor but that is a more advanced topic of lesser importance so we'll simply mention it here.

Coaxial cable selection for each installation may be a compromise between features, requirements, and cost. The ham has to factor in what he needs or wants, what is available, and what it costs.

A quick look at these features of coaxial cable:

Characteristic Impedance: Like all other cable, coax is specified at so many ohms impedance based on its physical and electrical properties. In radio work the characteristic impedance is usually needed to match that of the radio and antenna. Hence 50Ω is commonly used, although 75Ω cable may sometimes be used with an impedance matching device.

T9B02-2018: What is the impedance of most coaxial cables used in amateur radio installations?
50 ohms

Signal Loss: RF signal strength will attenuate as it passes through coax. This is an undesired characteristic which must be considered for each installation.

Different coax types have different losses so material selection (type) can be important. Online and manufacturer calculators are helpful here to select the best cable. Links to a couple are given at the end of this article.

T9B10-2018: What is the electrical difference between RG-58 and RG-8 coaxial cable?
RG-8 cable has less loss at a given frequency

Cable loss depends on diameter of the cable and dielectric (insulation) used between the inner and outer conductors.

Length is also a major factor; loss is specified in dB per 100ft, so it's apparent that short runs will have less loss. Conversely, a long run between the radio and antenna demands careful consideration of coax cable type.

Additionally, loss is proportional to frequency.

T9B05-2018: In general, what happens as the frequency of a signal passing through coaxial cable is increased?
The loss increases

For VHF and UHF application, a ham is advised to choose a lower loss cable, particularly for long runs.

Whatever frequency you operate, recall that a 3dB loss represents half power so make careful consideration of loss.

Power Capacity: Different coax types have different power ratings. For most hams with 100W maximum power, there are many common cables to choose from. Hams blessed with RF amplifiers running 500 to 1500W transmit power will need to be more selective about their coax. For receiver only situations or low power transmit (QRP), coax power rating is not a concern.

Here again online calculators are very helpful for cable selection based on power require-

HAM TECH 101

Useful tech info for newer hams and old

ments. As with all kinds of wire and cable, higher current demands thicker conductors so high wattage coax will be larger in diameter and less flexible.

Diameter & Weight: Coaxial cable comes in a range of diameters and proportional weight:

Cable diameter should be a minor consideration, as other factors such as power handling and loss are much more important. However, there are occasions when weight or size do matter. For example, this LMR400 coax is low loss for VHF but not practical to mate with a handheld radio:

While this skinny RG-174A coax is more appropriate (but rather lossy):

Flexibility: Coax is available with solid or stranded center conductors. Solid conductors make the overall cable more rigid but easier to terminate (solder) should you choose to roll your own. Stranded center cable is more flexible but also more expensive.

Environmental Resistance: The outer jacket determines the suitability of a coaxial cable use in various conditions. The biggest concern is resistance to ultraviolet (UV) light from the sun when coax is run outdoors.

HAM TECH 101

Useful tech info for newer hams and old

Other considerations are chemical resistance, if so exposed, and ability to bury coax under ground (direct burial), as some hams do.

All of these features can be found in the manufacturer's spec sheets and/or sales info for every particular coaxial cable type.

One of the more important considerations with coaxial cable use is to prevent moisture from entering the dielectric insulator between the center conductor and outer shield. Water intrusion will dramatically alter the characteristic impedance and increase loss of the cable, affecting performance. This is why there are a few license exam questions on the topic:

Obviously we should be concerned about cuts and abrasions in coaxial cable, as this also allows water an entry point. *-Jim Peisker, AF5NP*

T7C09-2018: Which of the following is the most common cause for failure of coaxial cables?
Moisture contamination

T9B08-2018: Why should coax connectors exposed to the weather be sealed against water intrusion?
To prevent an increase in feed line loss

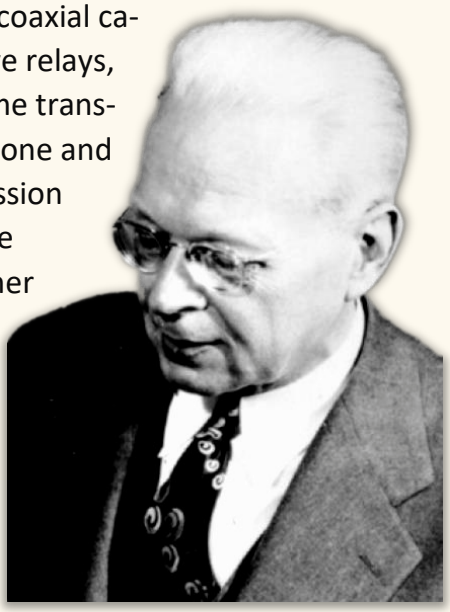
T7C10-2018: Why should the outer jacket of coaxial cable be resistant to ultraviolet light?
Ultraviolet light can damage the jacket and allow water to enter the cable

This column is reprinted with permission of Jim AF5NP from his blog www.NEWHAMS.info
References to FCC question numbers may be out of date but the content will still be accurate

HERMAN A. AFFEL (b. 1893, d. 1972) **is credited with inventing coaxial cable while working for AT&T Bell Telephone Laboratories in 1929.** This type of cable opened a wide spectrum of frequencies of long distance telephone service, making it possible to carry thousands of simultaneous phone calls on long distance circuits.

Affel was born in Brooklyn, New York and studied electrical engineering at the Massachusetts Institute of Technology. As a consultant to Bell Labs, Affel worked with Espenschied devising efficient means to carry high frequencies needed for broadband communications systems. Affel and Espenschied created a transmission system using a coaxial conductor, consisting of two concentric cylinders of conducting material separated by air. This structure reduced frequency losses and prevented outside interference.

Broadband coaxial cable created a higher capacity for local and long distance circuits. During his career at Bell Labs, Affel worked with other engineers to combine coaxial cable with microwave relays, making high-volume transcontinental telephone and television transmission signals possible. He earned several other patents for devices including antennas and transmitter systems.



■ *-editor*

GEAR

Guest Columnist: Dave Jensen W7DGJ

ONE THING I HAVE ALWAYS wanted to do is to put an entire station – radio, antenna, and key – into a package small enough that I can have it with me no matter where I go. Someone else may want to put that miniature station into a pack and climb to a summit. But for me, I'm just as often sitting in a hotel room or an Airbnb, wishing I had brought my ham radio gear along with me. I'd love to have my ICOM, but even my little Xiegu G-90 feels too cumbersome to have with me on trips like these.

My choice of radio for these scenarios is the Mountain Topper by LNR Precision. This radio fits in the palm of one hand and weighs less than 8 ounces. It operates with 5 watts out on four bands (20M, 30M, 40M, and 80M) and has a feature set that you'd expect to see on only a full-size radio. Are there compromises to get this into a package this small? Of course – but I've discovered nothing negative . . . certainly nothing with any impact on enjoyment. The Mountain Topper is simply a joy to operate.

Last field day I packed up a go-bag along with a 20/40M dipole. It fit into the glove box of my car, and leaves plenty of room whenever I toss it in my briefcase. In my column on QRZ I have occasionally spoken about the joy of QRP and how much it reminds me of fishing off the side of a bank with a worm and a bamboo rod. This radio is the perfect rod & worm replacement for "fishing" with a radio no matter where you are headed.

I didn't have much time to review the well-done PDF manual available on the LNR website before I took off for a park in the far South of Scottsdale, about 45 minutes from my home. I decided to explore the radio on my own (sans manual) and didn't think I could screw it up too badly by winging it. It's funny how QRP radios either attract attention or other hams don't have a clue what you would do with such a tiny signal . . . I got a few glances from other amateur operators (it was Field Day after all) but for the most part all the attention was focused on the legal limit setup going out of a huge Yagi that another ham had brought along on a cherry picker up 40 feet. So, I grabbed my tiny go-bag and set up quite a distance from the other radios.

When I plugged in ear buds to take my first listen, I thought something was wrong. I knew that there is no volume control on the Mountain Topper (one compromise made to keep it small and light) and assumed the worst. I had heard the startup sound (a CW signal telling me what band I was on) but nothing else. Then, as I tuned up a bit, a signal came blasting in, so clear and loud. . . it completely surprised me as it came from a non-existent noise floor. The problem for me wasn't a lack of volume . . . it was the fact that I am so used to turning up the gain to hear the whoosh of band noise. When CW signals began playing in my ears, I reminisced about times in my life when I haven't had to contend with noise at 4-5 on my S-Meter.

The power supply I brought along with the Mountain Topper was a small Bioenno battery pack with 12v output. The radio offers fantastic flexibility for power supply voltages and will work with anything from 5.5v to 13v. It also works great with a standard 9V smoke alarm battery. The radio put out 5w into a perfect SWR on the resonant antenna. I enjoyed going up and

GEAR

Guest Columnist: Dave Jensen W7DGJ

down the CW segments of both bands and always noted the match on the Mountain Topper's SWR readout.

As I began pecking away, I realized how slow I had become on a straight key and wished that I had brought along a working paddle (my SKCC credentials should be revoked). My first QSO on the rig was with a ham in Bartlesville OK, over 1000 miles on 5w. It is worth noting that in most of my QSO's that day I was heard. There were very few CQs that I responded to where I was *not* heard, despite my low power. They may have been 449 signal reports, but I was heard and understood, despite my rather sketchy straight key fist.

I very much like the high-quality machined aluminum case and the backlighted 2-line LCD screen on this device, as so often QRP radios have cheap plastic cases and simple LEDs to tell you what's going on. In this case, even in the dark I was able to see what kind of power I was putting out, my frequency and my SWR. Changing bands is easy, with all four accessible by heavy duty slide switches on the front and a corresponding CW beep that tells you what band you're on (plus, you can see your frequency on the screen). Additional features you don't usually see on a radio of this price or size would be RIT operation and three Morse code memory functions. The Mountain Topper MTR4B was designed by Steve Weber, famous for his QRP radio designs over the years. In my rating system, I rate Build Quality and User Experience. The Mountain Topper is one of those rare products that gets an A+ in both categories.

-Dave W7DGJ

ABOUT THE AUTHOR

***Dave Jensen, W7DGJ**, was first licensed in 1966. Originally **WN7VDY** (and later **WA7VDY**), Dave operated on 40 and 80 meter CW with a shack that consisted primarily of Heathkit equipment. Dave loved radio so much he went off to college to study broadcasting and came out with a BS in Communications from Ohio University (Athens, OH). He worked his way through a number of audio electronics companies after graduation, including the professional microphone business for Audio-Technica. He was later licensed as **W7DGJ** out of Scottsdale, Arizona, where he ran an executive recruitment practice (CareerTrax Inc.) for several decades. Jensen has published articles in magazines dealing with science and engineering. His column "Tooling Up" ran for 20 years in the website of the leading science journal, SCIENCE, and his column called **Trials and Errors: Ham Life with an** Amateur continues to be a popular read each month on QRZ.com*

Read Dave's column at:

https://www.qrz.com/trials-and-errors

QRZ NEWS YOU CAN USE

QRZ.com Updates from Dave W7UUU

Head Moderator & Director of Forums for QRZ.com W7UUU

HOW DOES THE QRZ call sign database work exactly?

The most common thing most hams think of when they think of QRZ.com is "looking up someone's call sign" either to see where they are located, see their station photos and personal details, check their QSL preferences, or even check their license level and status. For starters, the listing of all U.S. hams propagates into the QRZ system directly from the FCC database. Since that data is free public information, all it took was some clever programming back in 1993 by the site founder Fred AA7BQ to filter the FCC data into a user-friendly format that could be stored on a data tape, and in later years, burned to CD ROM (which surpassed tape systems to become the most common "large file portable data" format at the time).

Once the database was adapted for the CD ROM format, it became a more marketable item, selling for $19.95 and included not only U.S. call signs in searchable format, but the disc was also packed with tons of "pre-World Wide Web" shareware programs for radio amateurs—quite an added bonus! Today, the FCC is still the primary source of data for all U.S. hams and this information is culled from the massive FCC Universal Licensing System, or ULS as most hams know it.

Each day the FCC updates radio licenses of every possible type, from commercial broadcast stations to GMRS and every U.S.-sanctioned wireless system in between. And this of course includes amateur radio licenses. When a new license is granted, or a current licensee upgrades or changes their address, this updated information is entered into the ULS through a number of possible input systems.

Custom software written by software engineers in the IT department of QRZ daily polls the FCC ULS and gleans from it data pertaining to radio amateur licenses including new issues, changes to mailing address, upgrades to license class, and expiration/cancelation notices. This data then populates automatically into the very user-friendly database we all know as QRZ.com.

Ham members are allowed up to 100 lookups per day using the QRZ database with no subscription required. Of course, contesters and DXers usually purchase a subscription, with the basic level called "XML User" for the entry level, which then grants unlimited lookups for those big contest days when 100 per day wouldn't even come close to being enough!

Additionally, the QRZ database is openly friendly to interfacing into other systems, most notably logging programs such as N3FJP Amateur Contact Log and many others. This is handled using a software tool called an API, or Application Programming Interface, that provides a secure path from the 3rd party application into the QRZ database. The API communicates with the QRZ servers to verify user status before securely and quickly serving up the requested call sign data to the requesting logbook software.

Many users ask: "How can I change things like my name or address in my QRZ lookup?". The simple answer is you need to change that data directly with the

QRZ NEWS YOU CAN USE

QRZ.com Updates from Dave W7UUU

Head Moderator & Director of Forums for QRZ.com W7UUU

FCC ULS, after which it will appear automatically on QRZ within one to three days.

So what about all those DX stations that don't use the US-only FCC system? Well, many users of the forums may have noticed the forum called "Add my call sign to QRZ—Database Helpers Forum". That's the most common point of entry for non-U.S. hams to get set up in the QRZ system so other hams can find them, and so they may have their own QRZ bio page. This of course is because QRZ simply doesn't have access to the licensing authorities of other nations, so those users must apply manually for inclusion in the database. It's not uncommon for DX users to refrain from entering an actual mailing address, simply listing a city and a country.

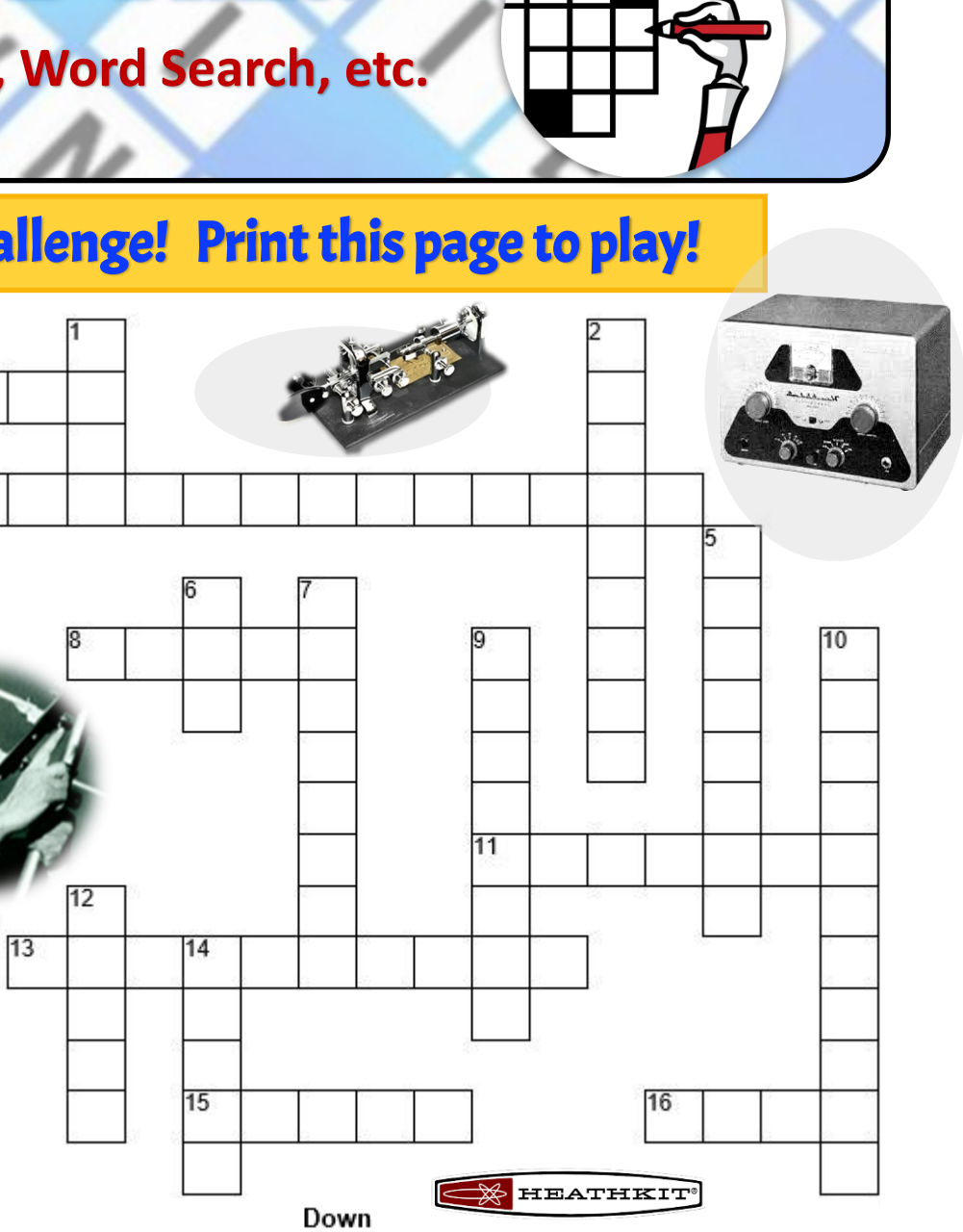
The U.S. is unique among many countries in that our license data is in the public domain, and a mailing address is required to be a part of that data. Most other countries have much more strict privacy laws so many DX stations just by their nature default to supplying the least amount of personal data as possible. And as mentioned, QRZ may start allowing US hams to redact some of their details as well in a possible site update down the road. So while most users of QRZ.com tend to think of the site as mostly an internet forum, with a Swapmeet, far and away the most popular feature by order of magnitude is the call sign database… there is truly no other such database on the scale of QRZ out there, boasting over one million users at any given time.

-Dave W7UUU

FUN AND GAMES!

Crosswords, Word Search, etc.

Crossword Challenge! Print this page to play!



Across

3. Mr. Yagi got all the press but it was his engineer friend who did all the hard stuff

4. Mr. Halligan started a radio company and he called it....

8. The Chinese radio brand called Wouxun when pronounced in English sounds just like....

11. _____ Bark

13. Boat anchor receivers designed by Oscar _____

15. Doctor Clifford J. _____

16. The part of a transistor that functions much like the grid of a tube

Down

1. Mr. Morse's assistant

2. The biggest brand and best known maker of semi-automatic Morse keys

5. A device used to listen to information sent by radio

6. If you had a radio device called a J-38, what type of device would it be?

7. The fancy name for a coil of wire used in an RF circuit

9. Long before Heath Co. sold electronic kits they sold _____ kits

10. A device used to send information by radio

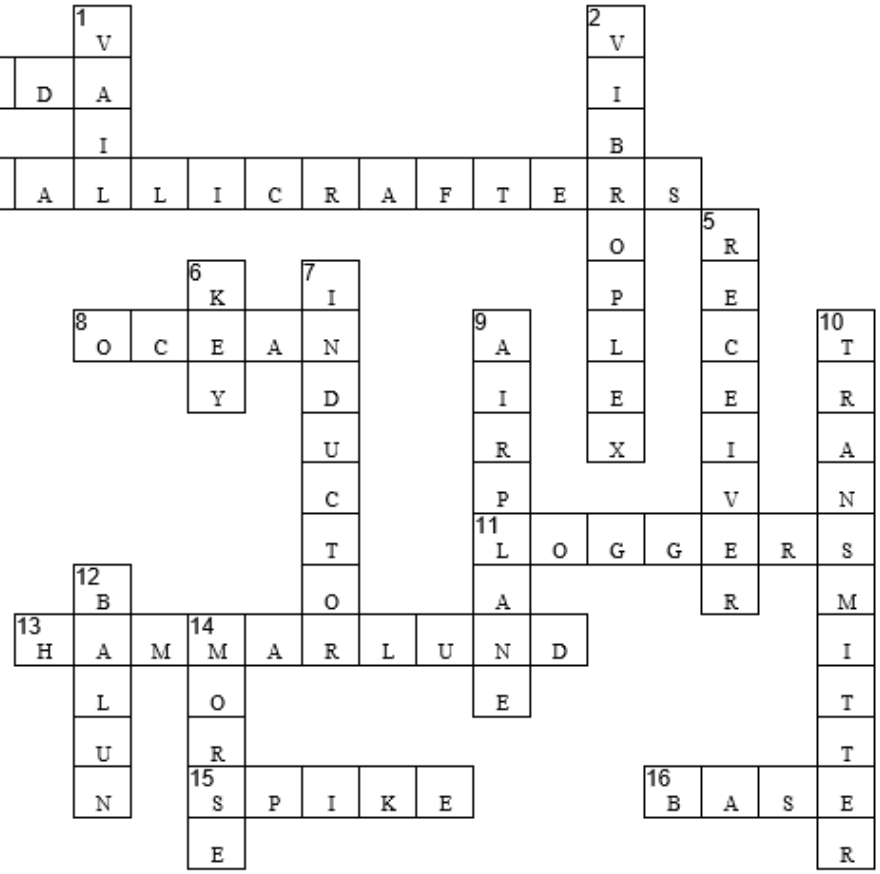
12. When things are unbalanced but need to be otherwise, this device is what you need

14. The guy who sent "What hath God wrought?" via radio

FUN AND GAMES!

Crosswords, Word Search, etc.

Answer Key… but don't cheat!



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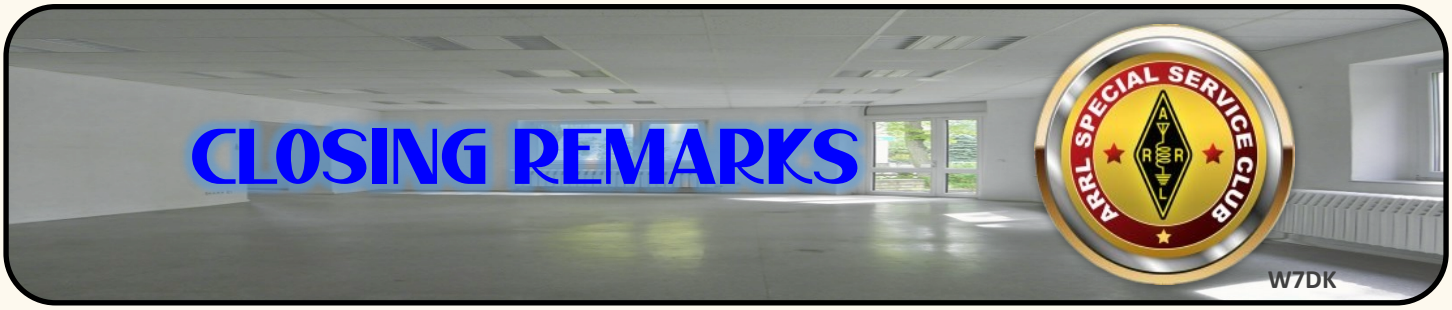

About this Publication

The Logger's Bark is the official publication of the Radio Club of Tacoma and is published by RCT, PO Box 11188, Tacoma, WA 98411. The Radio Club of Tacoma is a non-profit corporation as defined by law. All proceeds will be used exclusively for charitable and educational purposes. The Radio Club of Tacoma's Club House is located at 1249 Washington St, Tacoma, WA 98405, phone: 253-759-2040.

Emailing Officers

To contact any club officer, simply send an email to their call sign @W7DK.org

Contributions of Articles & photos

We WELCOME contributions of articles, guest editorials, blurbs, Hints-and-Kinks, shack photos, QSL cards, memorable contacts, anything of interest to your fellow members. Submit your materials via email to: loggersbark@gmail.com or via US mail to PO Box 11188, Tacoma, WA 98411

Radio Club of Tacoma Repeaters

Central Tacoma 2m:	**147.28 + PL Tone 103.5**
Central Tacoma 70cm:	**440.625 + PL Tone 103.5**
Crawford Mountain:	**147.380 + PL Tone 103.5**
North Tacoma:	**145.21 - PL Tone 141.3**

Membership Information

- FULL (licensed) and ASSOCIATE (non licensed) membership is $35 per calendar year or $30 for Licensed Seniors (65 and over)
- Licensed family members at same address pay $20 each for the first two and are free for the third, fourth, and so on.
- Full-time students, licensed or non licensed, up to age 25 are $20 per year.
- Fees are applicable for the calendar year: January to December
- Lifetime membership is 20 times the yearly fee you are eligible for. Lifetime memberships are calculated based on the FULL and ASSOCIATE rates.
- Visit www.w7dk.org For the latest and most current information on events and activities

MEMBERSHIP APPLICATION

CLICK HERE!

Have a submission for our next issue?

loggersbark@W7DK.org

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

Radio Club of Tacoma
BOARD OF DIRECTORS MEETING MINUTES
APRIL 3RD 2024

Quorum? Yes

Approval of Minutes: Motion to approve minutes as circulated? Approved.

Silent Key or Illness?

Nothing reported!

NOTE: These approved meeting minutes are reproduced here without any alterations other than to fit the available space, and to redact dollar amounts per Board rules. All language, punctuation, and spelling are exactly as submitted to the editor.

Secretary's Report: (Gary WG7X)

Annual report for Washington Secretary of State Corporations and Charities Division done. IRS also updated as of today. Personal Property for Pierce County has also been done. Usual mailings a couple of QSL cards for W7OS and the folks wanting to buy our clubhouse.

Treasurer's Report (Steve AF7YD)

Steve reports that the $*** problem with the bank statements has been resolved. He submitted three printed non-reconciled reports; Financial as of March 31st, 2024, one for Income & Expense (P&L) January through March 2024 and expense by class report. US bank account will be set up with Pay Pal. Our US Bank money market account has $*** in it at present. Steve's final reports will be submitted after Steve has had a chance to reconcile the various accounts.

Committee / Reports

Membership (Mike W7XH/George K7GRS)

Current membership 314. Mike is working on a postcard and email mailing service. He is asking for an additional $*** for these new expenses. Mike W7MKE made a motion to allocate an additional $*** and Adam W2NCC seconded it. Motion Approved. The membership approved budget is now $***.

Library (Doug AD7AV)

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

W7DK

No report.

Training (Stephan AD7AB)

Steve Dightman had a report about youth training:

We are continuing to work with Camp Quest NW folks with additional training. Leadership Track Crew (HS seniors) went to a retreat to learn all about being youth leaders. There was a hidden transmitter hunt. It was successful and it enabled the leadership to determine how difficult it (the hidden transmitter hunt) should be for future meetings. Discussion ensued about assistance from W7DK in the person of Chuck AC7QN and Al N7OMS.

VE Report (John AC7WW)

No report. Next test session Tuesday April 9th.

Info Tech and Website (Randy WB4SPB)

All systems are nominal.

HF Operations (Phil K7PIA)

Phil reports everything is working well in the HF station. State QSO parties are coming up. 7QP is coming up the first week of next month. Phil reports some African stations (Liberia) are coming up. 6400M is in use in the "Lou room". The amp is still back ordered. Palstar tuner is still in the Secretaries garage.

Tower (Nick K7MO)

Adam reports that Nick is getting ready to talk with him about the tower. Adam is still talking to ARDC about the grant. Grant is still under review and that's good news.

Repeater Operation (Al N7OMS)

Moved the repeater from the training room to the Bates site' also known as the channel 22 site. Unknown whether the repeater is working. The Two-meter duplexer cans went out to the Bates site also. Wayne KD7VWM asked a ques-

tion concerning the actual W7DK repeaters that are operational. Answer was 147.280 & 147.380 up and operating. 145.210 Bates site inoperative and the 440.625 is operational.

Facilities Management (Adam W2NCC)

Alarm system upgrade: Adam reviewed the idea about upgrading the software in the system. This is still in progress. System upgrade will allow approved members to be notified if an alarm occurs. This can be done through remote messaging.

Adam made a motion to purchase the Robblee additional service that provides remote access to the alarm under consideration. The number Adam mentioned was $877.95. President Mike suggested upping the amount to $***. President made the initial motion change, secretary seconded it. The $1000 is an installation fee for the system per the quote and there is an additional approximately $55 monthly cell fee through Verizon or AT&T for the remote messaging system.

The third motion was to purchase the system with the integral installation of $*** and the $*** monthly fee. Mike W7MKE asked about the difference between this system and a "ring camera" system. Discussion ensued. It appears that the "ring system" costs/ benefits are about the same as the initial one.

Dan KD7SV asked about using VOIP, Mike W7XH also made mention of using the existing phone lines for the service versus a Wi-Fi / cell phone interface. The module in question is internet enabled, so the connection needs to be either wi-fi or cellphone.

Doug Schrader asked about the systems addition's capabilities: The original quote from Roblee was attached to the 2024 BOD meeting minutes. Doug provided us with some material covering the new system's abilities. This information is attached to these minutes. Thanks, Doug, for providing this new information.

Steve AF7YD then asked about connection of the alarm to our repeaters. Doug Schafer read the system abilities into the report and indicated that the system will interface with wi-fi and or Verizon or AT&T cell service.

Motion was re-called. President asked for a vote on the changed motion: motion carried again.

Adam mentioned rodents in the clubhouse. Traps are set.

Property Management (Red WB7EC)

Red mentioned the donation shown below. He said that the things were brought to us from a fellow from JBLM. That occurred on the 16th of last month. Red reviewed the below list on the 23rd. Looks like good stuff in the list. Some of the stuff listed is in the hands of the PMT committee undergoing operational testing.

The Property Management team then requested permission to dispose of the following excess items from the Board of Directors of the Radio Club of Tacoma. Motion made by President Mike seconded by Secretary Gary to dispose of the following equipment. Motion carried.

1. RCT 4258 Yaesu VX-7R SN: 3M240200

2. RCT 4259 Yaesu VX-5 SN: 91120884

3. RCT 4260 Kenwood TH-D74 SN: B9310473

4. RCT 4261 Yaesu FT-1000D SN: 11280383

Red then reported a ballpark amount from M&K ham fest of about $***; $*** was taken in at the M&K ham fest and $*** was received in March for the usual clubhouse PMT sales. March total was $*** about a $*** before the ham fest resulting in a grand total of $***. Red is again asking for help to triage stuff in the donations collection in the garage. A lot of PJ's stuff still needing triage. Please consider assisting with the efforts ASAP. Red is considering retirement from the job at the end of the year.

Museum (Dan KD7SV)

Dan reports still working on equipment in the museum. Still working on the Hallidrafters HQ-140. Dan has been out of town, so there has not been too much activity in the museum in the last weeks. Some power cord wire updating needs to be done on some of the Heathkit radios.

Weds Workshop (Randy WB4SPB)

No subject at present. Randy suggests Field Day operations would be a good topic.

General Meeting (Dave W7UUU)

Talk about the printed Loggers Bark. Apparently, someone other than Dave printed out a full color copy for clubhouse use. The mystery person printout meant that there are three full color copies in the clubhouse now. A huge duplication of effort. W7DK still needs a new program manager.

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

Unfinished Business

Picnic Site? Mike W7MKE reports on the Spanaway Park location. Looks good, maybe a parking charge and it is in a central location. Discussion continues. Steve AF7YD looked at a couple of the local Tacoma Parks. Centrally located and lower cost. Discussion continued, President Mike asked for a show of hands on both sites. Ft. Steilacoom Park won out. The distance to walk to the venue was the greatest problem. This can be solved by adding signage that indicates to club members that the picnic is accessible via the back parking lot. Ft. Steilacoom usually accommodates extra signs along the drive to indicate event parking.

SeaPac table. Adam has a table available and available for the members use it with him.

Discussion about moving the clubs General meeting to the second Saturdays of the month. Meeting at a venue that can support more people and provide food services is needed. Adam has looked at a few good places to have the meetings. There are a lot of possibilities, but many of them want a lot of money for a single meeting. They are all out of our budget. The Golden Eagles club is looking to be the best place at $*** a month. They have audio visual services and a bar/restaurant. The Eagles Arie on Pine Street & 76th street is the one being considered. Coordination of the second Saturday with training and testing has been done, with Stephan AB7AB and John AC7WW preferring to keep their current training and testing schedule. The library annex is also still in consideration also.

New Business

Out of Area membership fee: Adam is considering adding a non-member type membership that would support the club's outreach abilities. He is thinking about a $*** dollar level. An out of area / State membership fee category. The cost would be 25 US dollars for 12 months/ 1-year RCT membership. This would be a non-voting member. Mike W7MKE suggests $*** level might be better, based on his experience with trade shows. Subject tabled for further discussion.

Field Day discussion by Mike Drorbaugh.

Possibility of not having a 20-meter CW station? Mike is asking the group about this idea of being a 4A versus 5A. He suggested making all stations be all mode instead of single mode. The general feeling is that there are not too many CW operators so it should not be a problem to do this. We will also probably have additional rocket launchers which will allow all stations to have a mono-band antenna.

Mike asked the group for their opinions of this, Randy and Mike discussed the idea, and it will be added to the general meeting agenda.

Mike also asked for permission to purchase large dark colored tarps to reduce the glare inside the tent. Discussion ensued. Mike mentioned that these tarps are available at Costco.

BOARD OF DIRECTORS

Board-approved minutes from the most recent meeting

Mike mentions that Nick K7MO has offered two “rocket launchers” to the club for a total of $***. Mike wanted to make a motion to purchase these “rocket launchers” for a total of $*** dollars.

Doug AB7DG mentioned that one online dealer in Ontario Canada has these same things go for $*** each not including shipping, the purchase of two of these for $*** is a very good deal.

Mike made the motion to make this purchase, President Mike seconded the motion. After discussion, the motion carried.

Renewal of club Callsign and the Trustee which is Nick K7MO. Nick’s license expires in September, W7DK expires in October. It is still months away, but time moves on…

Adam W2NCC floated a proposal to have a GMRS radio in the clubhouse. Would not cost anything to W7DK. General agreement in the BOD to try this experiment.

Wayne KD7VWM brought up an idea about buying a new style generator: Kickstarter. We will discuss this at next week’s general meeting. Here is the info he sent to the secretary after the meeting.

Please note: None of the following information has been vetted by RCT management! Click at your own risk! This looks a lot like the “kerosene powered” radios currently being discussed on QRZ.com. That technology uses a burner and thermocouples to develop electricity. (Ed.)
Wayne says: As I briefly discussed at RCT Board Meeting tonight, there is an upcoming Kickstarter campaign (launching Tuesday April 9) for a device that may be of interest to our SOTA, POTA and other field-op members. I cannot confirm its applicability to field operations, as I only have a base-station.
This "Kowwer" power station is a tiny generator, weighing under 5 lb, running on camper's GAZ canisters (or also Coleman 16oz cylinders with adapter, which can be MacGuyver-refilled from 20lb propane tanks), in a waterproof hard-case about 10"x6"x5", and putting out 8A at 12vDC, but also 150w at 110vAC thru its external inverter (apparently an "optional extra"), pulling 1KwH from one GAZ canister.
The general model P1 is on-offer thru Kickstarter campaign for $359, with 100w rated power, 130w peak; the upgraded model P1Pro apparently has same generator but only differs in having a larger internal battery; claims 300w rated power and 390w peak... (dunno how a bigger storage battery can increase load capability...) Engine is a tiny 3cc four-stroke with 150w power output @800rpm. Claimed to be only 58dB, about the same noise as a Honda eu3000i inverter-generator running at full tilt. No information if this unit's generator or inverter is "RF-noisy"...
For more info, see: https://www.kowwer.com
See https://mailchi.mp/56c6b7f35176/exclusive-invitationkowwer-is-coming-to-kickstarter?e=17df800393 to register for the Kickstarter campaign, which starts Tuesday, April 9. This info is time-sensitive, as often only the first few hundred Kickstarter orders get the full "half-off" discount.

Dave Ellison will be running an article on this unit in May Logger's Bark, but that may be beyond the time of best Kickstarter pricing...

If the uncertainty of Kickstarter campaigns worry, this link gets you to a direct factory reservation at same pricing, with 100% refund up to shipping date: *https://www.kowwer.com/reservation*

Regards, Wayne Gilham KD7VWM

Activity Reports, Discussion Topics, Announcements

WA7HTP in Graham was recently deceased, it was suggested that someone from the club help with the estate.

Congratulations to Doug Schafer outstanding volunteer of the year for his participation in ARES.

Ollie AD7CC was mentioned as a Master Gardener. He's been doing it since 1978.

AD7LJ has been promoted to ARRL SM.

Club Secretary apologized for not posting the full agenda prior to the meeting. There were "reasons" for that…

Adjournment at: 2126

Secretary Gary McAdams, WG7X

ATTACHMENTS FOLLOW

ATTENDANCE SHEET
Board of Directors Meeting
April 4th, 2024

	NAME	CALLSIGN	RCT NUM
	ATTENDED at Clubhouse		
1	Mike Drorbaugh	W7MKE	2761
2	Mike Isakson	W7XH	2657
3	David Stilwell	AC7KP	2073
4	Adam Barbera	W2NCC	2715
5	Mike Mikuchonis	W7XTZ	2470
6	Wayne Gilham	KD7VWM	3075
7	Doug Schafer	AB7Dg	2899
8	Steve Dightman	AF7YD	512
	Attended via ZOOM		
1	Red Cranefield	WB7EC	2561
2	Dan Vacanti	KD7SV	2640
3	Phil Pia	K7PIA	2681
4	Dave Ellison	W7UUU	743
5	Dave Ashley	W7GEL	2987
6	Randy Myers	WB4SPB	2050

BOARD OF DIRECTORS

W7DK

Board-approved minutes from the most recent meeting

DSC
From Tyco Security Products

System Enhancement Module
DSC PowerSeries™
Dual Path (LTE/Ethernet)

Features That Make a Difference:

- Supports the 4G LTE cellular network
- Fast, Reliable & Secure Wireless Signaling
- No Separate Power Supply Needed
- Remote Monitoring & Control via Web/ Mobile
- Expansive Coverage Footprint
- Home Automation & Energy Management
- Easy-to-Read Diagnostics
- Over the Air (OTA) Upgrades
- Easy Remote Programming with AirFX™
- CID and SIA Central Station Signaling

The Alarm.com Dual Path System Enhancement Module (SEM) is the most cost effective and comprehensive solution to migrate compatible DSC PowerSeries PC1616, PC1832 and PC1864 panels to Alarm.com's award-winning interactive services. The Dual Path SEM supportsthe 4G LTEcellular network and optional Broadband Ethernet. This ensures the longest lifecycle with the most secure and reliable service.

- Enable wireless reporting of alarms and other system events using the LTE wireless (cellular) network and Broadband Ethernet
- Configure and support installations from any browser or smartphone using Alarm.com's familiar and easy-to-use web and mobile support tools, includingthe Dealer Websiteand MobileTech
- Enable Alarm.com interactive monitoring and alerting for end users
- Integrate Alarm.com's home automation and energy management services with the SEM's built-in Z-Wave capabilities

Features

Fast, Reliable & Secure Wireless Signaling

The Dual Path SEM sends alarms and system events over both the LTE cellular network and Broadband Ethernet connection to ensure fast, reliable, and secure communication. A landline phone connection is not required.

Remote Monitoring & Control via Web/Mobile

Operation of the SEM from the Alarm.com web and mobile interface is simple and allows system access at any time, from any location. Web features from Alarm.com include viewing system and sensor status/history, arming and disarming the system, setting up and managing user codes, and creating customized e-mail and text message notifications for any type of alarm or non-alarm activity at the property.

Easy Remote Programming

Save valuable time and money with Alarm.com's Remote Toolkit. Using the Dealer Website or MobileTech, you can troubleshoot and resolve many customer issues remotely with just the click of a mouse.

Functions Include:

- Edit sensor type and name in panel
- Add and delete sensors
- Change entry/exit delays
- Manage user codes
- Upload/Download panel settings

The SEM does not require downloader software or a phone line connection to the control panel.

Contact your DSC distributor
www.dsc.com | 1-888-888-7838

BOARD OF DIRECTORS

W7DK

Board-approved minutes from the most recent meeting

DSC

From Tyco Security Products

Home Automation & Energy Management

Alarm.com's automation and energy management services allow remote control of Z-Wave devices through web and mobile interfaces. Rules can be created to leverage the entire system of connected devices and security sensors.

Video Monitoring

Alarm.com's full suite of video services allow customers to keep an eye on their property from anywhere. Customers can view live video feeds and event-triggered recorded clips on their mobile app or customer website. Alarm.com's camera line-up includes HD-quality indoor and outdoor cameras as well as a stream video recorder for 24/7 recording.

No Separate Power Supply Needed

The SEM does not require its own battery or transformer. It runs on the control panel's AC power and backup battery sources and can function reliably for more than 24 hours during a power outage.

Easy-to-Read Diagnostics

The SEM's diagnostic LEDs allow installers to monitor the connection between the control panel and the module and between the module and the LTE cellular network. The LEDs also indicate cellular signal strength, which is useful when choosing the best location for the SEM installation.

Over the Air (OTA) Upgrades

With Over the Air (OTA) firmware upgrades, you can easily keep your SEM inventory current and updated with all the latest features.

CID and SIA Central Station Signaling

Alarm.com makes it easy to connect to CID and SIA compatible central stations.

Specifications

Power Requirements	12 V nominal, 130 mA (continuous) 2000 mA (instantaneous peaks) maximum (from panel battery)
Cellular Network	Dual Band 4G LTE
Panel Interfaces	Three keypad bus connections 12V power and ground to panel battery
Alarm.com Module Indicators	One module/panel communication status LED, one module power LED, one automation LED, three wireless communication status LEDs
SEM Circuit Board Indicators	One LAN LED, one processor LED, one COMM fail LED
Z-Wave Frequency	908.4 MHz
Operating Temperature	32 to 120°F (0 to 49°C)
Storage Temperature	-30 to 140°F (-34 to 60°C)
Humidity	90% relative humidity non-condensing
Enclosure Dimensions (L x W x D)	7.5 x 4.25 x 1.5" (19.05 x 11.43 x 3.81 cm)
Case Material	High-Impact, ABS plastic

Carrier

AT&T	Part #: ADC-SEM210-PS-AT
Verizon	Part #: ADC-SEM210-PS-VZ

Compatibility

The SEM module is compatible with the following products:

- PowerSeries PC1616, PC1832, PC1864 version 4.2 and newer
- PK5500/5501/5508 and RFK5500/5501/5564 V1.2+
- PTK5507 V1.12+ and WTK5504 1.0+
- IT-100 or PC5320 and SEM module cannot be used on the same system
- SEM Supervision will take the last zone slot of the control panel

P/N 30002493

For product information
www.dsc.com
Product specifications and availability subject to change without notice. Certain product names mentioned herein may be trade names and/or registered trademarks of other companies.
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GENERAL MEETING

W7DK

Minutes from last month's meeting

Officers and Directors Present

_X__	President	Mike Mikuchonis W7XTZ
_X_	Vice President	Adam Barbera W2NCC
_X_	Secretary	Gary McAdams WG7X
_X__	Treasurer	Steve Dightman AF7YD
_X__	Board	Doug Schafer AB7DG
_X__	Board	Mike Drorbaugh W7MKE
___	Board	Paul Matney W7PFU
_X_	Board	Phil Pia K7PIA
_X_	Board	Red Cranefield WB7EC

NOTE: These approved meeting minutes are reproduced here without any alterations other than to fit the available space, and to redact dollar amounts per Board rules. All language, punctuation, and spelling are exactly as submitted to the editor.

Meeting Called to Order at: 1901

Flag Salute: Led by President Mike Mikuchonis

Quorum? ___N__

Welcome and Acknowledgement of New Members and Visitors (Please introduce yourselves)

Mark KB7HDX Tharp is currently the Northwest Division Director. Has been active in the ARRL for many years. He is our program for tonight.

Program (Dave W7UUU)

Considering the very recent changes in the local ARRL representation, Dave, W7UUU

invited Mark Tharp, KB7HDX, Northwest Division Director, to give us a roundup of the

changes and such at ARRL - and to just open the club up for any ARRL-related Q&A. In addition, both Mark and Dave congratulated our ne SM AD7LJ who was recently appointed to that job. Congratulations Bob!

So please be welcoming of Mr. Tharp as the Program Presenter for next week's General Meeting. Mark started his presentation at 1907.

It was a good presentation. Doug Schafer had some emcomm and traffic questions for Mark which were answered after some discussion between Doug and Mark. Doug will be continuing the discussion on these points via email.

Al, N7OMS asked Mark about grants from the ARRL for our repeaters or other equipment. Mark indicated that the "window" for applications is currently open, so he encouraged RCT to send in applications. Commander Bob AD7LJ mentioned that emcomm classes will open May 19th.

Some discussion of other events continued… Much back and forth with Mark then meeting continued on. Dave W7UUU mentioned our original certificate of Affiliation with the ARRL that hangs on the clubhouse wall now.

Health and Welfare/Silent Key & Illness.

Dave, W7UUU reports Steve AD7VL is sick… Details are not available.

Secretary's Report: (Gary WG7X)

Annual report for Washington Secretary of State Corporations and Charities Division done. IRS asset report also updated as of today. Personal Property for Pierce County has also been done. Usual mailings of bank statements and a couple of QSL cards for W7OS.

Treasurer's Report: (Steve AF7YD)

Steve's final reports will be submitted after Steve has had a chance to reconcile the various accounts.

Steve reports that the reconciliation with QuickBooks has been done for the amounts reported to the BOD.

Taxes (county property and personal property) for the year are now paid and the amounts are about $5000 total.

Committee / Activity Reports

Membership (Mike W7XH/ George K7GRS)

Current membership 314. Mike is working on a postcard and email mailing service. Some updating data on the website

with Randy… George is working on the website.

Library (Doug AD7AV)

George K7GRS is working on the website. It is still a work in progress.

Training (Stephen AD7AB)

Steve Dightman had a report about youth training for CQNW. Reported to the BOD. The full text of this is in the BOD minutes.

Steve is looking for books on ham radio targeted on kids in the 9-year age range. This is to get kids interested in STEM / ham radio education.

Stephan conducted training last weekend 06- 07 April, four new trainees and two returning trainees. Test results in the VE report from John AC7WW immediately below.

VE Report (John AC7WW)

On Tuesday April 9th, 2024, your VE Team graded 25 exams at the Clubhouse. Nine candidates passed element 2 to join the Amateur ranks as Technicians. One candidate passed element 2 & 3 to become a General. Two candidates advanced to General. One candidate failed an initial examination.

Thanks to the following VE's for their time and service.

Leonard, KA7NWF, Rich, KK7VH, Mike, W7XH, Rob, K7TGU, Stephen, AD7AB, Whit,

KG7LNZ.

The next scheduled test session is Tuesday May 14, 2024.

HF Operations (Phil K7PIA)

Everything in the HF room was reported as working well. Contesting this month mostly state QSO parties, W7DK might

operate in the 7QP this year. Come up stairs and get on the air! DX A8OK Liberia is on the air right now, Go gettum!

VHF &UHF emcomm radios are good. Flex 6600 upstairs in line and working well. Mercury antenna tuner and amp are also working. HF committee is waiting to do some training on the new equipment from PJ's estate before releasing the amp to general use.

Training on this and the new tuner and amp will probably be done after the last bits are received, and that is still in progress.

Info Tech and Website (Randy WB4SPB)

All systems are nominal.

Randy proposes to create a separate "Volunteer Opportunities for club members" (or something similar) web page, with prominent access directly from the home page.

The Volunteer Opportunities page would essentially be RCT job listings. Top of mind are Red's need for help with PMT, the club's need for an assistant Treasurer, and editor Dave's persistent warnings about not doing meeting programs any more.

Sponsors (e.g. PMT Red WB7EC, treasurer Steve AF7YD, President Mike W7XTZ) would provide me with a job description, any required qualifications, contact information, etc., which I would then publish on this page.

I'm certainly open to discussion and other ideas along these lines. If my proposal meets with general approval, I'll create this new web page as soon as I receive at least one description of a volunteer opportunity.

As usual, discussion started about the details of this opportunity. Randy is getting the details nailed down…

Al N7OMS asked about someone writing a grant for the new NAS equipment. Ball was kicked around a bit. Randy indicated that since funds had already been allocated, he will proceed as previously decided.

Tower (Nick K7MO)

Adam reports that Nick is getting ready to talk with him about the tower. Adam is still talking to ARDC about the grant. Grant is still under review and that's good news.

Repeater Operations (Al N7OMS)

Moved some equipment out to the Bates as indicated in the BOD report. Cans are out there MTR 2000 controller is out

there. Putting in system grounding, attaching the system rack to the floor, putting connectors on the coax and some other minor issues in progress.

Repeaters that are currently operational are: 147.280 & 147.380 up and operating. 145.210 Bates site inoperative and the 440.625 is operational.

Facilities Management (Adam W2NCC)

Alarm system upgrade: Ongoing, still in discussion with BOD.

Adam mentioned rodents in the clubhouse had been reported. Traps are set. No dead rats yet! Adam thanked Dave AC7KP for his help with the grass. Plans for spring cleaning are in progress. Also, it's time to pressure wash the north side of the clubhouse.

Property Management (Red WB7EC)

Red mentioned the donation shown below. He said that the things were brought to us from a fellow from JBLM. Red asked if anyone had looked at the PMT list in the clubhouse and noted the date.

Property Management team requested permission to dispose of the following excess items.

1. RCT 4258	Yaesu VX-7R	SN: 3M240200
2. RCT 4259	Yaesu VX-5	SN: 91120884
3. RCT 4260	Kenwood TH-D74	SN: B9310473
4. RCT 4261	Yaesu FT-1000D	SN: 11280383

Red then reported a ballpark amount from M&K ham fest of about $2500; $1386 was taken in at the M&K ham fest and $238.00 was received in March for the usual clubhouse PMT sales. March total was $1624 plus sold $1000 before the ham fest resulting in a grand total of $2624. Red is again asking for help to triage stuff in the donations collection in the garage. A lot of PJ's estate stuff is still needing triage. Please consider assisting with the efforts ASAP. Red is considering retirement from the job at the end of the year.

Jeff KK7QRJ asked about the PMT team hours, Red replied 0830 to about 1100 local. Jeff wanted to know because he was interested in helping the PTM committee.

Jeff KK7QRJ, then volunteered to assist Red with PMT. Whit KG7LNZ asked Red about loaner equipment. The answer was

yes and Red will coordinate with Red to borrow some equipment. Red indicated the loner equipment list is being updated.

Museum (Dan KD7SV)

Dan reports still working on equipment in the museum. HQ-145 audio is OK now. Dan will begin the alignment process to improve the receiver's ability to hear signals.

4th Wed. Night Activity (Randy WB4SPB)

No subject at present. Randy suggests Field Day operations would be a good topic.

Bark Editor (Dave W7UUU)

There was talk about the printed Loggers Bark. Apparently, someone other than Dave printed out a full color copy for clubhouse use. The mystery person printout meant that there are three full color copies in the clubhouse now. A huge duplication of effort. Dave repeated his request that someone else had printed the Loggers Bark using their own printer and they really don't want them to waste their own ink and paper.

Unfinished Business

- **Picnic Site**: BOD decided to have the annual picnic at Ft. Steilacoom Park Again this year. The distance to walk to the venue was the greatest problem. This can be solved by adding signage that indicates to club members that the picnic is accessible via the back parking lot. Ft. Steilacoom usually accommodates extra signs along the drive to indicate event parking.

- **SeaPac table**. Adam W2NCC has a table available and available for the members to use along with him. In addition, RCT will also have a table, plenty of opportunity to sell some stuff.

- **Adam W2NCC** leads a discussion about moving the clubs General meeting to the second Saturdays of the month is still on going. BOD has been given several good leads to consider for venues. Post covid opportunities exist but they are getting hard to find. Results posted in the BOD minutes too… Please review the BOD meeting minutes for details. The Golden Eagles were the best at about $250, Adam is waiting for response from the G-E. Golden eagle on south Tacoma was $50 a month.

GENERAL MEETING

W7DK

Minutes from last month's meeting

New Business

- **Out of Area membership fee:** Adam W2NCC is considering adding a non-member type membership that would support the club's outreach abilities. Subject tabled for further discussion. Intended for members that are not local. Members would also be non-voting members. Mike w7MKE reminded the group that RCT already has an associate membership type. Tabled again for discussion at the next BOD meeting.

- **Field Day discussion by Mike Drorbaugh.**
  Possibility of not having a 20-meter CW station is being considered. Best choice currently is to have all stations 10 through 80 be multi-mode with a bit of scheduling involved. Members were asked for their input at this general meeting.

  Mike also asked for permission to purchase large dark colored tarps to reduce the glare inside the tent. Discussion ensued. Mike mentioned that these tarps are available at Costco. Club Secretary Gary WG7X has some up for grabs also.

  Mike mentions that Nick K7MO has offered two "rocket launchers" and W7DK has purchased them.

  Field Marshal Mike's address to the troops:

  Radio Club of Tacoma FD 2024 by Mike W7MKE

Well here goes… I'm the new FD Manager for 2024, not because I'm the best but because I realized the best were tired and need help, so I volunteered. You will have to put up with my level of incompetence or volunteer yourself.

Planning so far has been informal conversations with the stakeholders and former managers and some recruiting. Last year's Field Marshal, Adam W2NCC provided me with a good comprehensive checklist of tasks so I don't have to remember everything. I also have gotten valuable insights from Gary WG7X, AL N7OMS, Randy WB4SPB and others and have also enrolled four station managers: Gary WG7X will be in charge of the 10M station using the IC-7410; Mike W7XTZ is going to manage the 20M station using the IC-756 Pro III; Ellen AI7FP with manage the 40M station using the Flex 6400M; and Dan KD7SV will manage the 80/15 station using the Flex 6500. They will be looking for an assistant station manager who can become familiar with the radios and logging so please approach them to volunteer.

In keeping with the acknowledgment that Radio Club of Tacoma does not operate FD as a serious contest,

GENERAL MEETING

Minutes from last month's meeting

W7DK

but it is rather a picnic with radios, we will be less focused on QSO count and more on our core goal of training, opportunities for more operators and having a good time. We need to match available resources to these goals and not burn out the helpers.

For those reasons, we will not have a dedicated 20m CW station this year and will operate with 4 stations rather than 5 stations, making us a 4A station for FD. We are working with the stations managers to have each station capable of operating all modes: phone, CW, and digital (FT8 & possibly RTTY). The issue with RTTY is that it pretty much requires that we use N1MM/MMTTY as our logging and decode software and that may be just too hard to integrate both with operators, networking the station logs and we don't much return for the hassle—especially for Randy who must do much of the head scratching figuring out how to setup and network logs, etc. Moreover, the station managers who, except for Gary, have not used N1MM before. In years past we have done RTTY, but it always seemed to interfere with other modes, so it had to operate in its own time slot. As FT8 and RTTY are both "digital" modes, we should just go with FT8 for FD as most other stations will use that for their digital mode. RTTY will probably have fewer available contacts. We can set up and learn N1MM and RTTY for RTTY contests for those of us interested. RTTY unnecessarily complicates FD set up for small returns in available operators and QSO count.

Other changes are in deployed antennas. We will have available three AB-577 (rocket launcher) towers this year as we acquired another one from Nick K7MO. We plan to have training on setting up those towers on June 8th (weather permitting) or June 15 as an alternate date. The towers will support a 10M, 15M and 20M monoband Yagi's. The 80/15 station will have the 80/15 fan dipole although with the 15M Yagi, the 15M portion of the fan dipole will not be used. The 40M antenna is under review. Previously we used a combination dipole/wire Yagi. It is a good antenna but is something of a hassle to put up without lots of hands to help. We are considering replacing that with two dipoles, one for East-West direction and one for North-South direction. The positive for doing two dipoles is ease of installation while the negative is in having to making the two dipoles with baluns and a lesser performance in the East-West directions, our most important directions. So, depending on if I can round up enough helpers for the dipole-wire Yagi prior to building new antennas, will determine which 40M antenna is deployed.

Other changes will be to cover our large 20 x 30-foot operations tent with a dark tarp to reduce the daylight in the big tent, making it much more friendly to viewing monitors and radio controls. In the past, this has been a major issue, so we need to darken the tent. I envision a couple of 15 x 30-foot tarps will do the job. This is Washington, the blue tarp capitol of the world, so I already have one tarp offered. Anyone else have a big tarp for our use? Doesn't have to be blue. Color is not a design or aesthetic issue.

We plan to have the station manager's final or near final integration one or two at a time at the club house by mid-May. Each manager will have available their radio, monitors, TNC, keys, computers, or other gear for operating the stations in all modes. This will include being able to access and control radio settings for each

mode (phone, CW, and digital) as well as having set up man-in-the-box and logging software. Once the integration is successful, the radio and all accompanying equipment will be in the charge of the station manager and the manager will be responsible for transport to the FD site and setting up the station. The 6400M which is now in the Lou Room can be replaced during its absence with the IC-7300. As we all know, the Lou Room is not seeing a lot of operation at that station so the temporary replacement of the 7400M with the IC-7300 should not be much of an issue.

Also, station managers. While signup sheets have been available in the past, I think they will be more important this year as we have one fewer station and CW operators will be wanting to have access to stations to operate. They will not have their dedicated station and will have to integrate with phone and digital operations at each band/station. No reason why everyone cannot get operation time although the ability to run a long-time pileup on any mode may be impacted by sign ups. We simply must acknowledge this is an exercise in emergency setup and communication and an opportunity to meet and have fun with fellow club members rather than rack up the most QSOs.

Training for operators is under consideration and if we do it, it will probably be May 22 or May 29 where we setup stations in the Lou Room and one in the Training Room to receive and use one of the HF Room radios to transmit dummy signals so operators can get used to function key use and exchange protocols. If you plan to operate during FD, I encourage everyone to participate in this training. If you're an old hand, please consider being an Elmer for this exercise.

Finally, we will be at Western State again this year with the layout approximately as in the last couple of years. Camper's welcome. Power will be the club's generator and Mike W7XH has agreed to supervise the power distribution once again.

So, to-do:

Station Managers get with Randy WB4SPB and make sure your radios, computers and all your gear are functioning. Please contact Randy and set up your time with him.

Everyone who wants to help with setup Friday June 21 and Saturday AM June 22, please contact me Mike W7MKE and let me know what you can help with. We will need transportation to the site for our gear on Friday.

A special thank you to Deanne Jenks KA7DCX for taking on the publicity activities once again this year. Extra Points (even if it is not a contest). Also, Doug Schafer AB7DG is going to be our Safety Manager. And will we get extra points for contacting our ARRL Section Manager? Our very own Bob Purdom AD7LJ.

GENERAL MEETING

Minutes from last month's meeting

W7DK

Do not forget, this is a potluck too so check with Chef Paul W7PFU to see what is most needed. As always, the club will provide some of the meals.

I know I've forgotten someone so please forgive me for that. I do appreciate everyone's help.

73 Mike – W7MKE, 2024 Field Marshal

- Adam W2NCC floated a proposal to have a GMRS radio in the clubhouse. Would not cost anything to W7DK. General agreement in the BOD to try this experiment.

- Wayne KD7VWM brought up an idea about buying a new style generator: Kickstarter. We will discuss this at next week's general meeting. Here is the info he sent to the secretary after the meeting.
  (Truncated for brevity Ed.)
  Here is the website for this product: https://www.kowwer.com
  This looks a lot like the "kerosene powered" radios currently being discussed on QRZ.com. That technology uses a burner and thermocouples to develop electricity. (Ed.)

Show and Tell

TBD

Tuning and Traffic

None reported.

Announcements

WA7HTP in Graham was recently deceased, it was suggested that someone from the club help with the estate.

Congratulations to Doug Schafer, outstanding volunteer of the year for his participation in ARES.

Ollie AD7CC was mentioned as a Master Gardener. He's been doing it since 1978.

AD7LJ has been promoted to ARRL SM.

Adjournment: 2103

GENERAL MEETING

W7DK

Minutes from last month's meeting

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6	Doug Schafer	AB7Dg	2899
7	Steve Dightman	AF7YD	512
8	Leonard Bustiner	KA7NWF	2308
9	Jeff Winget	KK7PRJ	3110
10	Diane Sim	W7SIM	2304
11	Al Ferguson	N7OMS	2107
12	Gary McAdams	WG7X	1249
	Attended via ZOOM		
1	Red Cranefield	WB7EC	2561
2	Dan Vacanti	KD7SV	2640
3	Phil Pia	K7PIA	2681
4	Dave Ellison	W7UUU	743
5	Walt Morey	WA7SDY	2763
6	Randy Myers	WB4SPB	2050
7	Manny Adonis	AD7MA	3028
8	Mark Thorp	KB7HDX	Visitor
9	Bob Purdom	AD7LJ	2240
10	Deanna Jenks	KA7DCX	1458
11	Gary Hurnblad	WA7SH	2689
12	Whit Worcester	KG7LNZ	2677